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Western Millers Mutual Fire Insurance Co., Kansas City, Mo.	$ 435,561	$ 450,000
Michigan Millers Mutual Fire Ins. Co., Lansing, Mich.	1,107,313	1,263,133
Mill Owners Mutual Fire Ins. Co., Des Moines, Iowa	994,856	1,200,000
Millers Mutual Fire Ins. Co., Harrisburg, Pa.	757,515	839,587
Millers Mutual Fire Ins. Co., Ft. Worth, Texas	391,958	437,774
Pennsylvania Millers Mutual Fire Ins. Co., Wilkes-Barre, Pa.	1,060,736	1,157,182
Ohio Millers Mutual Ins. Co., Van Wert, Ohio	109,169	104,290
Grain Dealers National Fire Ins. Co., Indianapolis, Ind.	1,203,538	1,222,118
Millers National Ins. Co., Chicago, Ill.	2,068,453	2,347,576
	$9,038,461	$10,026,460

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HAROLD P. JANISCH - - - - Editor and Bus. Mgr.
S. J. DUNCAN-CLARK - - - - Contributing Editor

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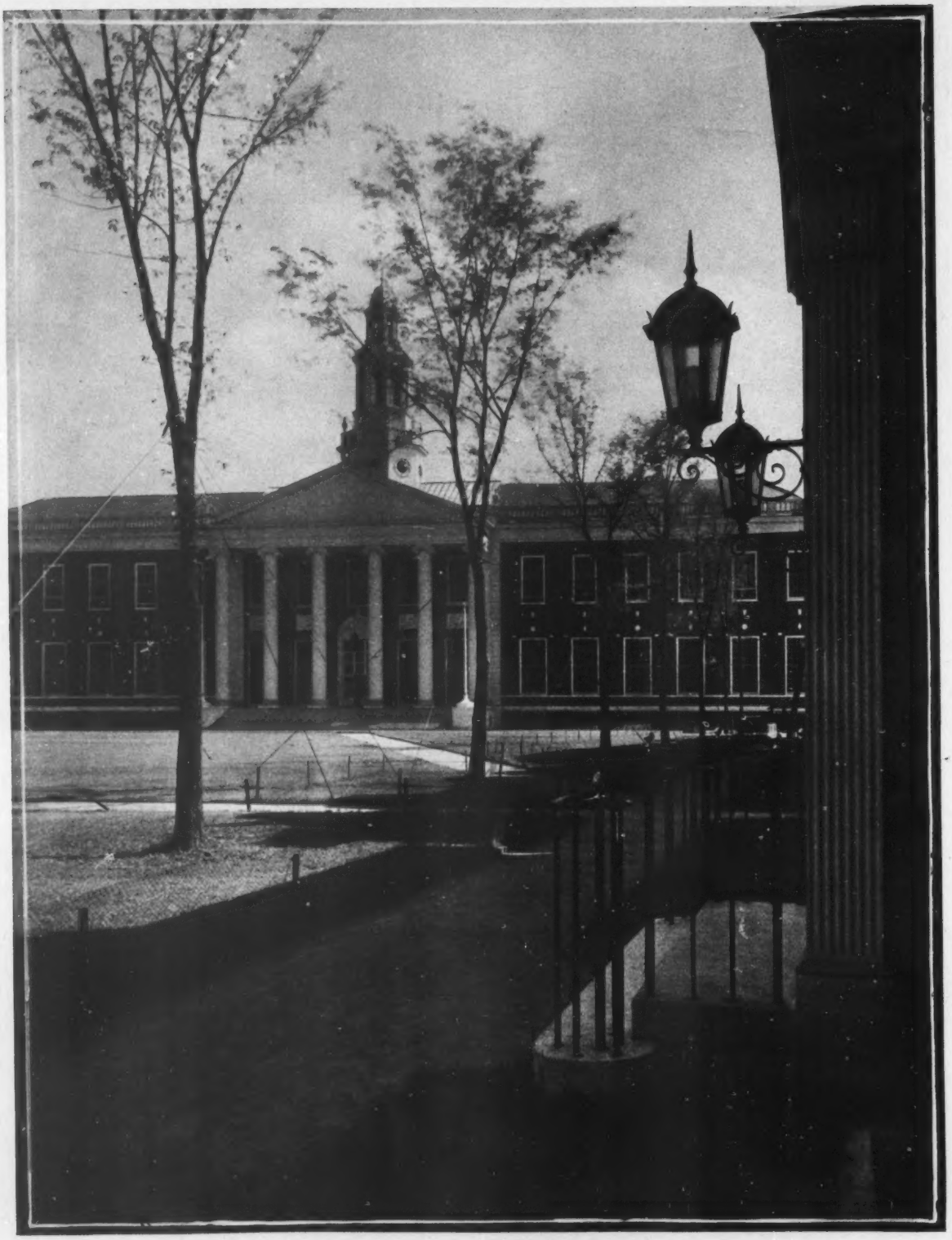

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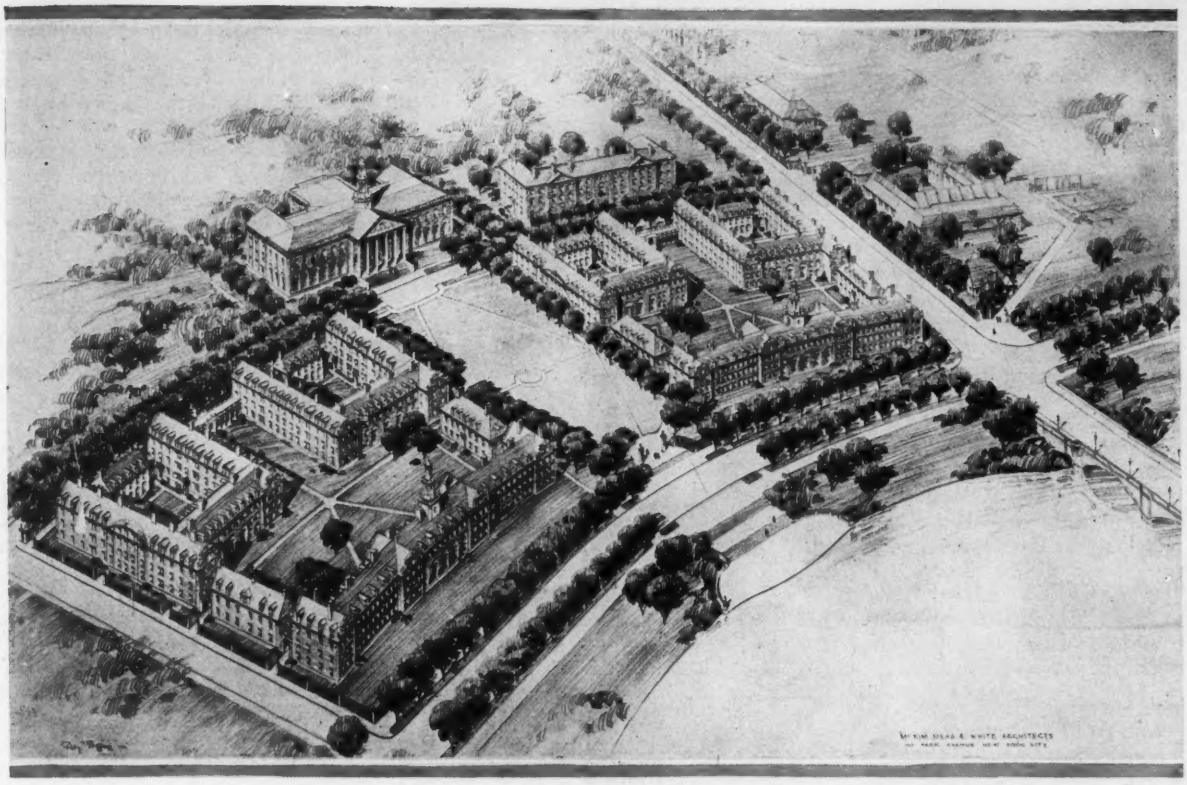

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Need For A Broad Executive Theory

Opportunity Now Offered To Learn From Business Experiences of the Past What To Avoid and How To Proceed In the Present

UNLESS we admit that rules of thumb, the limited experience of the executives in each individual business, and the general sentiment of the street, are the sole possible guides for executive decisions of major importance, it is pertinent to inquire how the representative practises of business men generally may be made available as a broader foundation for such decisions, and how a proper theory of business is to be obtained. The theory of business, to meet the need, must develop to such a point that the executive, who will make the necessary effort, may learn effectively from the experiences of others in the past what to avoid and how to act under the conditions of the present. Otherwise, business will continue unsystematic, haphazard, and for many men a pathetic gamble, with the failures of each serious business depression made up largely of the best moral risks.

Reprinted from Harvard Business Review

By WALLACE B. DONHAM

Dean of the Harvard Graduate School of Business Administration.

> *"THE gipsy in Asia Minor makes iron nails one at a time with a hammer on an anvil, just as his ancestors did before him for hundreds of years. I have seen him doing it; but I also observed that his small children were stark naked and that his larger ones had only one garment . . . In industry and commerce all things are become new."*
>
> *Charles W. Eliot*

No amount of theory can be a substitute for energy, enthusiasm, initiative, creative ability, and personality, nor will it take the place of technical knowledge. Now, however, all of these personal qualities may be coupled with an adequate technical equipment, and yet the executive of wide experience may fail through our inability to grasp the broad underlying forces controlling business, a knowledge of which would give a sound basis for judgment. It is a serious criticism of our business structure that it so long lacked an adequate method by which these broad forces may be appraised, their probable course charted, and their applications to individual executive problems made reasonably clear.

The Importance of Business Precedent

THE need of a better theoretical basis for executive action exists in all lines of industry. Business decisions are now governed by the precedents and practises current within each particular industry to an extent which makes these precedents almost comparable in weight with the precedents in the law. The inertia with which any large corporation or any individually managed business opposes a departure from the habits, customary practises and precedents of that organization is well recog-

nized. These precedents and practises are of various types. Within each industry competent leaders study their management problems constantly and each manager creates many precedents and practises which are the basis consciously or unconsciously, of his own decisions. Precedents of this type are limited mainly to the industry of which his concern is a part if they are not wholly personal to his company.

One of the assets which an employer always has in mind when he engages a new executive from another company in the same industry is this background of personal experience, upon which he relies for the improvements to be accomplished through the newcomer. In addition to the localized precedents within each concern there is an increasing tendency for the interchange of such precedents among competitors and each industry as a whole thus tends to create within itself a structure of traditions which largely control the executive action taken in that industry.

Business Precedents Limited to the Particular Industry.

IT is still true, however, that each industrial group learns and benefits little from the experience of other groups. An international banker discussing the subject recently, referred to the fact that American business men typically know nothing of any business but their own as their most serious limitation in international competition and in their approach to current reconstruction problems. The recent economic disturbances culminating in the business depression 1920-21 afford complete and disconcerting evidence of the widespread ignorance of the economic background of business in its application to particular industries and especially of the lack of any adequate concept of the relation between the business cycle and individual executive problems. The work of the Harvard Committee on Economic Research was at this time so recent that few executives knew of its existence and fewer still had confidence in its forecasts.

The big swings of business occur perhaps once in a business generation. The new generation of managers, as it approached the conditions of 1920, had great need for records in usable form of the experiences of 1893, but no such records exist. With striking exceptions in the case of individuals who had been students of economics and were able to apply their economic background to the problems faced in 1919-20, many of the most able and energetic industrial managers met with maximum difficulties during that severe depression. In many cases also the more stodgily managed concerns survived in better condition than their energetic rivals.

The premium on the lack of initiative at certain stages of the business cycle can be removed only by adequate business records of widely differing types, from which may be developed theories and precedents for use by the executive. This business generation owes it to its successors to make such records that the new generation may approach the problems of some later depression with a background of proper information. Business needs not less theory, but much more.

MUTUAL INSURANCE MEETINGS TO BE HELD THIS SPRING

These gatherings are discussed on Page 28 of this issue

Failure of Business Men to Benefit From the Work of Economists.

THE business cycle is perhaps more important to business men than any other phase of the economic background and economists have been for many years working on its phenomena. Notwithstanding this fact, business men were almost wholly unprepared for the depression of 1920. The difficulty is that the studies of the economist had not generally been carried far enough into the executive problems of specific industries for the executive to use the results in his own business, and much more work has yet to be done before these results will be fully available. Each executive always feels that his own business is different from others. To a certain extent he is right, for the broad economic forces affect different industries with varying intensity and at different times, but no industry is immune from the operation of these fundamentals. This feeling on the part of the executive that his business is different can be offset only by economic studies made from his standpoint, which are developed to the point where each manager may see how his business is in fact affected by these forces, and may understand the relation of his particular industry to other industries.

THE business man customarily feels that economists are too theoretical and have little to offer which is of value in his business. Consequently he minimizes the importance of their work. To some extent this feeling on his part has been justified. The slender resources of the economist have been inadequate to enable him to gather the type of data most valuable to the business man,[1] and the economist's point of view is social while the business man's point of view must be primarily individualistic. This difference between the social and the individualistic interest affects even the form of the economist's work, while its substance has generally been in fields well separated from those in which the business man must find the basis for his decisions. The failure of correlation between the business man and the economist arises also from certain inherent limitations in the intellectual training of the typical business executive. Inasmuch as most of the economists' efforts deal with problems whose solutions are not directly applicable to business, the business man has usually failed to learn the language of the economist. There is a resulting lack of understanding of economic work which makes it difficult for him to appreciate its value. *(For Note 1 See Page 8)*

Whatever the reasons for the condition, there are few connecting links between these two groups, and the work of the economist is not guiding the action of business men to the extent that it should. This is true of different types of industries in different degrees. The banker, with an adequate economic training, finds the point of view of the economist close to that required for his most important executive decisions. He can, if he will, get much value for the conduct of his business out of this economic training and out of current economic thought. The banker deals with considerable groups of industries and is obliged

to consider conditions which affect them all. His mental processes are less special and nearer the social point of view of the economist than is true of other business men. On the other hand, the manufacturer is rarely interested in economics except as he may be irritated by a difference of opinion on some national issue, or as he feels that they overlook the essentials of some practical operating problem, for example in labor relations. He finds little in the work of the economist which he understands and less than he can apply in his own business. The economist has not carried his work near enough to the executive problems of the manufacturer to make it readily available. So far as each manufacturer can see, his business is in fact different from others.

Need of Standards for Executive Decisions

INDUSTRY also needs theoretical development of another type. Every executive is today handicapped by lack of information as to the methods by which other executives solve internal executive problems similar to his own. The accountant has built up a basis for gathering facts for use as precedents and background for many decisions of this type, but almost universally accounting data are limited to one concern. Recently there have been devised a few standard accounting systems applicable to whole industries and, when comparable figures are collected through the use of such systems, the information so made possible will give an industrial rather than an individual basis for action. This movement as yet has only a start outside of railroads and public utilities and while accounting methods remain in the present unsystematic and unstandardized condition, the opportunities for using accounting data to create standards and precedents are almost wholly limited to each particular concern.

Photo by Notman

Dean Wallace B. Donham

The technical and semi-technical problems of the major industries have for many years been subjected to serious study by engineers and managers, and while revolutionary changes affecting technical methods will result from the constant advance in the sciences, this side of business management is already far more scientific than the non-technical side. The greater advance in technical theory should be credited in part to the fact that the engineer must generally leave records in a form which can be observed and used as precedents by other engineers. For example, layout problems, well solved in one plant, become with the growing conception of unity of interest within industries both valuable and available for the use of others in the same industry. Technical development alone, however, is an unsound foundation for the successful conduct of any business, and unfortunately the

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well worked out analyses and solutions of non-technical executive problems are not similarly recorded. They fail therefore to spread from one company to another and from one industry to another, as they should. This is true notwithstanding the usefulness of information affecting industry generally or particular industries as a whole, such as trade statistics, price series, wage data, interest rates, census reports and other data published by private and governmental agencies, which exist in considerable volume.

IN a few limited fields there is already, through existing publications, an exceptional basis for executive action. Such services as Moody's Manual furnish standards of great importance in the fields of public utilities and railroads. Here both accounting and operating conditions are standardized and the technical and non-techical problems are similar. The student of a particular utility or railroad may, from the data recorded in such manuals and in the Interstate Commerce Commission and similar reports, form an excellent impression, easily supplemented by personal investigation on the ground, of the essential characteristics of a company investigated. On the other hand, while similar information in the industrial volumes of these manuals is significant, it is less valuable than the information about railroads or utilities. No standards either of accounting or of operating conditions exist as to these miscellaneous industries and there is infinite variety of technique. Moreover, the effect on such companies of fluctuations in commodity prices and other operating conditions is much more marked than in the case of utilities, and the intervals between periods when information is given are so long that no effective check on conditions is obtained. In large measure the difficulties which the investment banker has met in dealing with industrial securities arise out of considerations of this nature which affect the validity of conclusions drawn from the ordinary data.

WHILE the exchange of experiences among different concerns, except as one hires the employee of the other or as they compete in buying and selling, is very recent in its development, the tendency in this direction is a factor of much importance for the future of business methods. Every executive must have noted the marked difference in this regard in the last 20 years. Trade secrets of a non-technical nature have ceased to exist in many well-managed plants, where 20 or 25 years ago it was difficult for the manager of a competing concern even to visit. Such interchange is today generally possible and accepted. Whether this change in attitude should be attributed to the disclosure of facts brought about by income tax and similar governmental returns is for the present purpose immaterial. A revolutionary change in attitude has in fact started within the last generation. This change for obvious reasons is so far almost entirely limited to particular industries, for most of the interchange has been accomplished through trade associations and through personal contacts which are largely within each trade.

On the other hand, the amount that each industry has to learn from the practises and precedents of other industries apparently far different in character is only just coming to be realized. Trade associations and business men's organizations of various types have done something to improve conditions in this respect and organizations like the National Industrial Conference Board have made substantial beginnings in studies which are of interest to many industries. At the best these instances are exceptional. While in a few fields beginnings have been made through research, out of which much may be expected in the future, scientific standards for comparative tests of business efficiency do not now exist, and managers in one industry learn little from managers in other industries.

The Scientific Method and Business Theory

IN substance the theoretical background for business stands today somewhat where the law in England and France stood in the period from 1200-1300. In both countries the law was local to small territorial units. This corresponds to the present condition of business precedents and practises which are local to particular industries or companies. To a considerable extent also the decisions of the courts were based upon customs and upon the memory of each judge as to his own past practices. The present scientific development of law is an outgrowth of recorded legal decisions which have since 1195 in England,[2] and approximately 1252 to 1271 in France,[3] formed the background for the study of legal problems.

All the pure and applied sciences of the present day have developed in the same manner. Before the scientific method came into use, the astrologer and the medicine man created fantastic hypotheses to account for the phenomena of nature. Sun, moon and stars ceased to be the subject of absurd and fantastic notions and were recognized to be under the influence of laws controlling their ordered movements only after Copernicus, Keppler and others conceived the idea of recording and collecting systematically over a considerable period of time the facts about their movements. It was then possible to classify these facts in series and sequences, and to develop from these records and classifications laws or theories which not only explained the present but gave a method of predicting the future.

Methods of research in science vary as widely as technique in business, but while the technique of research varies, the conception that scientific studies should be approached through the collection and classification of facts and through the development from recorded facts of generalizations and theories into which the facts fit, is the basis of all science. This method has been applied with great effectiveness to such fields as the law, which lack the exactness of natural sciences. In this respect business resembles the law more than the natural sciences, and therefore the probable course for the development of theory in business is more analogous to the similar development of the law than it is to chemistry or physics. It will require, however, the applications of the same scientific method.

(*Editorial Note*: *In the next section of this article will be discussed the development of the "case system" of teaching the executive theory of business.*)

[1]See Bullock: The need of endowment for economic research. Harvard Graduates Magazine, June, 1915.

[2]Pollock and Maitland: History of English Law. Vol. 1, p. 169.

[3]Continental Legal History Series. Vol. 1, Part III, page 224.

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Sell Him the *Idea*— He'll *Buy* Insurance!

Second of a Series of Articles on Salesmanship, Especially Written to be of Service to Those Writing Farmers' Mutual Insurance

By CHARLES HENRY MACKINTOSH

THE first article of this series gave you the "Golden Pass-Key" that will unlock a farmer's mind and let you inside to explain what your mutual insurance really means to him.

You must make him think: "This is going to be *good* for me!" just as he did about that hot dinner pictured in the previous article.

He won't buy because *you* want him to; and he won't buy merely because he *needs* insurance. He needs lots of things, but he buys only what he *wants;* and he wants only what he has seen for himself is going to be *good* for him to buy.

Go out and test that principle for yourself. Lean over the gate and say to some farmer friend:

"Jim, we'd like to have you with us in our Mutual Insurance Company. You need insurance, and I'd like to fix you up."

Right away, unless that farmer really feels that he *owes* you something, he is going to start thinking up alibis and excuses.

"Well, Tom, I'm not quite ready to talk insurance with you right now; but take it up with me again some time in a few months or so, and I'll be glad to talk to you about it."

THAT doesn't mean a thing. It's just apple-sass. Of course, it wouldn't fool *you* for one moment; but lots of insurance solicitors—particularly those who are young and green at the business—accept an alibi like that as though it were the next nearest thing to a contract. It's the next nearest thing to being kicked off the farm; that's what it is!

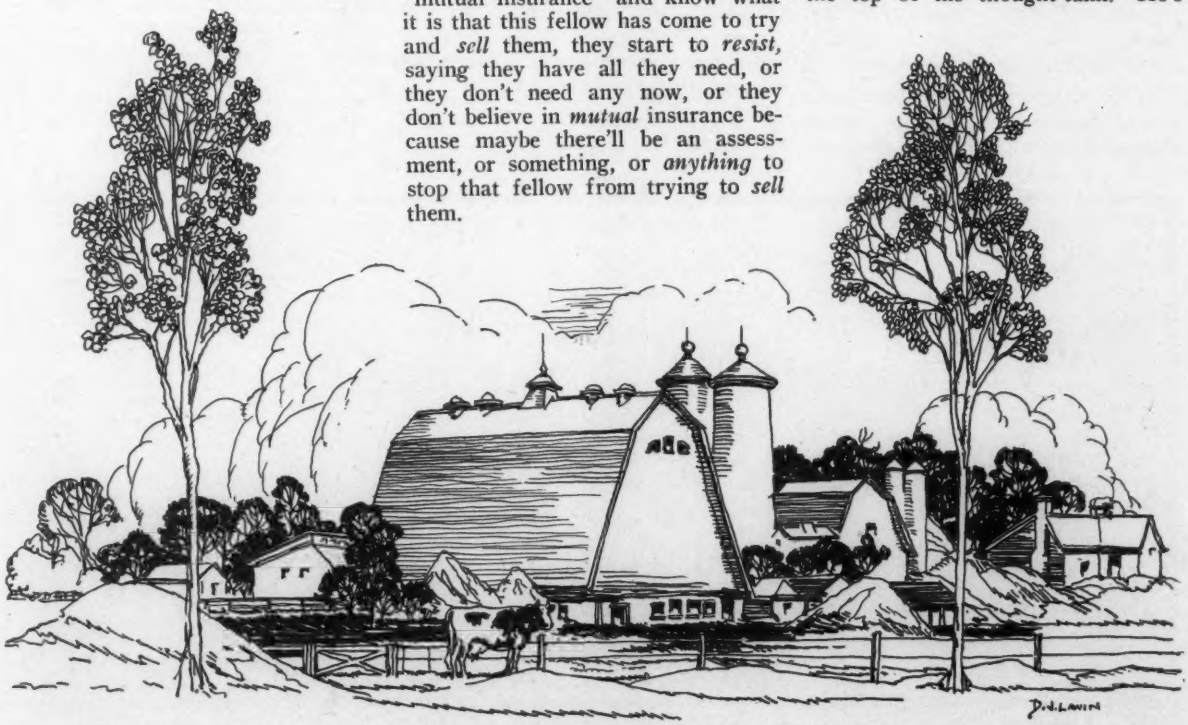
In case some of your solicitors don't already know it—and lots of folks who are trying hard to be salesmen *don't* know it—you might remind them that they really musn't go out with the idea that it's their job to find farmers to whom mutual insurance can be *sold.* That idea tends to make 'em talk in terms of "selling" instead of in terms of "serving." Farmers don't like to be "sold." They like to *buy* what they *want.* The second a salesman tries to *sell* them something, they begin to build a barrier between themselves and that salesman.

As soon as they hear the words "mutual insurance" and know what it is that this fellow has come to try and *sell* them, they start to *resist,* saying they have all they need, or they don't need any now, or they don't believe in *mutual* insurance because maybe there'll be an assessment, or something, or *anything* to stop that fellow from trying to *sell* them.

Why rouse up all that resistance, right at the hardest point in the whole proposition, when *first* the salesman meets the prospect? Why not say instead, something that tends to make the farmer *think* in terms of his own self-interest? Do that, and he won't be thinking up alibis and excuses. Make him think: "By golly, if *my* cow-barn burned down *tonight,* I'd be out pretty close to ten thousand dollars without a penny of protection!"

The farmer whose mind is filled with *that* kind of thought isn't going to answer in alibis or say it with glowers. He's going to be too much interested to say *anything* while the salesman goes ahead with his story.

HOW can he be made to think that way? It's so easy that few people ever think to try it. The fact is that the farmer *already* has his big barn and his fine herd of Alderneys or Jerseys floating mighty close to the top of his thought-tank. He's



A Farmer Likes and Deserves to Be Complimented When His Neatly Kept Place Reflects His Prosperity and Intelligence

more interested in *them* than he is in anything else around the farm, except perhaps the wife and children.

If you care to test the truth of this out for yourself, it's mighty easy to do so. Instead of saying: "Jim, we'd like to have you with us in our Mutual Insurance Company," try something like this instead:

"Jim, I reckon you've got the finest herd of Jerseys in this part of the State; and you sure do take good care of them, too, in that fine, big, modern barn of yours!"

What's Jim g o i n g to think about *that?* What *can* he think, but "This fellow's all right. He's got sense. He k n o w s what's what!"

What's more, it will work out exactly the same way if, instead of knowing that farmer well enough to say "Jim" you have to start off by saying, "Mr. Erickson."

Well, what have you accomplished by getting Farmer Jim Erickson feeling all tickled inside that way? You've accomplished *two* vital things: first, you've made him feel *friendly* towards you, and, you know, we *must* do business with *friends* . . . even if we've got to make new friends on the spot . . . because an enemy won't trade with us. People don't like to trade with *strangers* either; but no one stops to think that *you* are a stranger, even if you were, when you start right out by making them feel *friendly* towards you.

Well, that's the *first* big thing you've done for yourself by letting Farmer Erickson see that you appreciate his prized possessions. The second thing you've done is just as important:—you've brought his mind around to the very place where you can start to show him where and why he needs and ought to *want* your kind of mutual insurance.

Now that he's *thinking* about his barn and his fine herd of cows, suppose you go on to say:

"You must have a *mint* of money tied up in that one b u i l d i n g. What with the barn itself and your herd of blooded s t o c k, I reckon you've got all of ten thousand dollars right in that one spot?"

GIVE him a chance to say "All of that!" or "Nearer half as much again!" or whatever he wants to say. And right now you may have to resist a temptation to unmask your main battery of big guns and say "Let me insure it for you!" or something like that. If you do, you'll be sorry. Jim will *stop* thinking about his nice barn and his fine cows and about what a discerning fellow you are; and he'll *start* thinking: "Blamed if he ain't peddling insurance!"

Then he'll *resist,* maybe even *harder* than he would have done if you'd started right out to *sell* him some insurance, because then he wouldn't have had to *change* his thoughts with such a jerk!

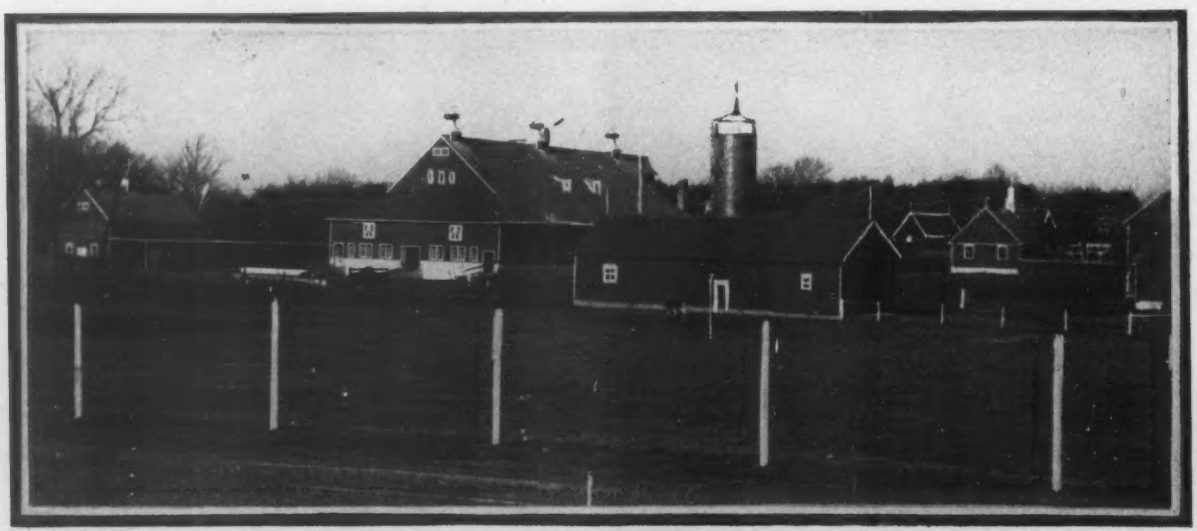
A good start is . . . a good start; but that's all it is. It can lead to a *bad* end just as easily as to a *good* end, unless one *keeps on* the way one started.

Here's Jim, thinking about his fine barn and his prized herd, and how he has the equivalent of all of ten thousand dollars in Cal Coolidges best currency tied up right in that one spot. But what of it? It's *safe,* isn't it? Been right there for months and months, or years and years, and nothing ever happened to it *yet!* You see, Jim isn't *ready* to think about insurance just yet. There's another step or two to be taken before his mind will be that far along the road to readiness.

Next, you must bring him to realize the *possibility* of his property *not* being quite so safe as he hopes it is. He won't think *that* kind of thought on his own accord, you may be sure. Folks don't. They put unpleasant and painful ideas like that just as far out of their minds as they can. Yet, Jim has *got* to realize the *risk* he's running with that ten thousand dollars worth of property, before he'll be ready even to *consider* the question of buying ten thousand dollars of *protection* for it. That obviously *true,* isn't it?

Well, how shall we make him realize that without scaring him to death or making him mad? If we were to blurt right out "Maybe it will burn down tonight!" *you* know what Jim will do. He'll start to think up reasons why it *won't;* and he'll be mad at *you* for even suggesting that it might. All right, then, we won't talk

(*Continued on page* 28)



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Well Laid Out Farms with Modern Buildings and Machinery Are Invariably Covered with Adequate Insurance

Photo By P. & A.

Such Spectacular Accidents As This Call Attention Vividly to the Hazards of Automobiling

Auto Insurance Then and Now

Interesting Summary of Motor Car Coverage From It's Small Beginnings to Big Volume of Today

By AVARD L. BISHOP
Professor of Business Administration, Yale University

ARTICLE VIII

THE business of insuring automobiles, as contrasted with many other forms of insurance such as fire, marine and life, is still in its infancy. The first automobile insurance contracts date back but little more than a quarter of a century. People of the present generation who scarcely have reached middle-age can recall the time when the motor car was merely an experiment within the field of transportation improvements, when the business of producing motor cars had not yet emerged as an American industry. What a transformation has been accomplished within a relatively short period! In scarcely more than twenty-five years the production of motor cars has developed at such a phenomenal pace as almost to surpass the power of human comprehension. Not only has a great industry been established, but also an entirely new branch of the insurance business has been called into being to assume the manifold risks entailed upon owning and using the product of the industry. As a setting for the subject of this article—Automobile Insurance—there will now be given a few outstanding facts regarding the automobile industry, particularly with regard to its development in this country.

AT the beginning of the year 1927, there were between twenty-two and twenty-three million motor vehicles registered in the United States. Eighty thousand of these were motor coaches, and an additional three million were motor trucks. The balance, not far from nineteen and a half million were passenger cars. In the calendar year 1926, the motor car manufacturers of the United States produced over four and a quarter million new cars, and this tremendous number does not include the substantial outputs of their Canadian branches. We hear much nowadays of the great magnitude of certain of our industries, particularly those that pertain to iron and steel production, packing-house products, the refining of petroleum, the output of chemicals, and so on. We should not wish to minimize the importance of these or other outstanding industries that might be listed, nor do we wish to deny their importance in American life. But the annual value of the output of motor vehicles of all kinds surpasses the annual value of the product of any of the industries just mentioned. This means that, from the standpoint of annual value of product, the automobile industry is our premier industry at the present time.

And the people of this country are the greatest consumers of motor cars of any people in the world; about eighty-five per cent of all motor vehicles in operation throughout the whole world are owned by American citizens resident within the United States. Our manufacturers not only supply an overwhelmingly large proportion of our cars but a substantial export trade in automobiles has been built up to meet the foreign demand. According to figures that we have seen attributed to the National Automobile Chamber of Commerce, the automotive industries of the United States in the year 1926 consumed 83 per cent of the rubber, 50 per cent of the plate glass, 12 per cent of the copper, and 12 per cent of the iron and steel consumed by all industries in operation in this country. Surely the present magnitude of the motor car industry—a growth of about two and a half decades—almost surpasses the power of human comprehension.

AS every thinking owner of an antomobile can testify, it is difficult to exaggerate the manifold hazards attendant upon the ownership and operation of a motor car. It has been said, in effect, by a keen observer of automobile hazards that about the only condition under which a motor car itself is immune from the possibility of accident, or may be rendered incapable of inflicting injury to other property or to persons, is when the gasoline tank has been completely drained, when the battery has either been removed or disconnected, and when the inanimate machinery has been stored away in a fireproof receptacle. The author of this idea certainly knew what he was talking about.

When a motor car is ready for operation its possibility to receive injury and, under certain conditions, even of doing injury is considerable; when it is in actual operation on the highway, the possibility of its receiving and inflicting injury is multiplied a thousand-fold. It is said that the twenty-three million automobiles in this country travel each year, on the average, something like four thousand miles each—a grand total of approximately 90,000,000,000 miles. Great potential possibilities for accident are here involved, and the same is true when the machines are receiving gasoline at filling-stations, when they are parked at the curb or on inclines, when they are in garages for repairs, and so on. Surely the hazards surrounding the car itself, other forms of property, and the public as well, are great and manifold.

Photo by U. & U.

Just Another One of the Scores of Disasters Which Occur Daily

Now there are of course various ways of viewing and handling such risks. The owner may assume them himself if he so desires; and if he has an accident he will settle the claims adjudged against him if he is financially able, or he will collect from the other party, if he can, if he suffers a loss himself. Time and again, however, this plan has proved to be the financial undoing of the owner. Another method for the owner to handle his risk problem is to transfer it to an insurance company for an agreed consideration and let the company do the worrying. Such companies are specialists in risk assumption, and they perform what to many seems a miracle by changing individual uncertainty as to accident into practical certainty, so far as the company is concerned, as to the number of accidents that will happen in a given time to a certain larger number of cars. The individuals virtually pool their risks and pay a proper premium to the company that takes over the risks. Thus there is created a fund out of which those who suffer accidents may be indemnified. This, as every well-informed person knows nowadays, is the function and business of insurance, and, as we view it, he is a wise motor car owner who transfers his motor risks to a competent insurance company. As a matter of fact, many persons who now own and enjoy their automobile would feel it incumbent upon themselves to get rid of the machine for good and all if it were necessary for them to assume all the worry and uncertainty attendant upon the operation of a car without insurance coverage. Under such a condition of affairs they would soon be nervous, if not financial, wrecks.

THE magnitude of the motor industry, and the hazard brought into being by its product are the only limitations to the possible expansion of the automobile insurance business. Here was and is a great field for fire and casualty insurance, and the companies and their representatives have not been slow to embrace the opportunity of serving the motor-owning public by assuming all or a part of their risks for a proper consideration.

In order that an automobile owner may shift his risks resulting from such ownership to an insurance company (or companies) several forms of coverage must be purchased; each of these has a history of its own and was devised to meet the situation as the demand arose. In order to be in line for indemnity for possible happenings to the car itself, fire and theft insurance would be considered first in the normal case. Collision coverage also would be necessary to make it certain that the owner would be indemnified for injuries to the car through collision. But these three types of insurance do not afford complete protection to the car itself, for neither gives coverage for damage from water leakage, earthquake, tornado, or explosion. A thorough canvass of the situation would probably disclose still other hazards that would have to be insured against if an "all-in" coverage for the car were desired. It is probably fair to say, however, that the average owner, so far as insurance against damage to the care is concerned, stops at fire and theft, although collision insurance is, of course, in considerable demand.

Coming now to a consideration of the hazards of the car owner and operator as relating to the potential damages that may be done by the machine itself to the property of other people and to individuals themselves, the types of coverage necessary to meet the situation are property damage and public liability, it being assumed that the owner, if he has a chauffeur among other employees, is carrying compensation insurance for protection against possible injuries to all of them. From what has been said, it is evident that to meet all of the potential hazards involved in motoring, many forms of insurance are necessary. To describe the origin and development of each of these would necessitate the writing of a volume of substantial size. All that we may hope to do here is to give a few pertinent facts regarding some of the more common forms of coverage purchased.

IN this country, two types of companies control the automobile insurance business. Fire and marine companies sell coverage for the hazards of fire, theft, collision, and other possible happenings to the car itself such as by tornado, explosion, or earthquake. Public liability and property damage coverage is sold by casualty companies—the latter selling collision coverage as well.

It is said that fire insurance on automobiles started in this country in 1902, the coverage being for both fire and transportation. The story runs that the desired coverage was for fire, but that transportation insurance was practically thrown in to make certain that the contract was legal, in that it was issued by a marine insurance company; the transportation feature made it certain of course that the policy truly was a marine contract. This and other early automobile fire policies excluded coverage for fire originating within the car itself. By 1905, however, this restriction was removed so that the coverage was virtually complete.

All of the earlier fire policies were based on the sound principle of indemnifying the insured for his actual loss on the day of the fire. For some reason or other, however, certain companies began selling policies of the valued type, and this same form of policy came also to be issued covering the hazards of transportation and theft. The significance of the valued policy, as of course many readers will understand, is that when the policy was written a valuation was placed on the car, and if loss occurred during the life-time of the policy, the insured, instead of being indemnified for his loss, was paid the sum representing the valuation originally made, with no deduction for depreciation. Now everybody knows that an automobile in use depreciates in value very fast and largely for this reason it was inevitable that the valued policy as applied to automobile insurance would in time through a process of selection be eliminated. This is what has happened. For the past six or seven years the valued policy has scarcely been heard of. In some parts of the country the pendulum swung the maximum distance, so to speak, for there came to be issued a form of policy whereby the company agreed to indemnify the owner for the actual cash value of the car in case of fire, no principal sum at all being mentioned in the policy.

INSURANCE covering the hazard of theft of automobiles is said to have been written by American companies for the first time in 1905. This type of coverage on a car became linked up with the fire insurance policy covering the machine in question, and as is well known the same general plan is still followed.

(*Continued on page 26*)

Photo by U. & U.

Myriads of Automobiles and Each One a Prospect for Some Live Mutual Company

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Harold P. Janisch, Editor and Business Mgr.

Mutuals Are Winning America

THE story of mutual insurance in America for 1927 is being written. The record is shaping itself in statistical tables and detailed reports. The summarizing chapter has yet to be compiled, but sufficient information is in our hands to justify us in saying that the past year has been the biggest in the growth of the mutual idea. All the indications available support the belief that it has been the most prosperous year for those who believe in and practise this form of insurance.

It is our natural impulse to congratulate the army of mutual policy holders upon their good fortune, which, of course, is to congratulate the owners of mutual insurance companies. The policy-holder and the profit-maker are one and the same person. When the cream rises to the top of mutual companies it is not for the skimming of a select few, but for the benefit of all.

And yet in speaking of good fortune we are not thinking of anything fortuitous. It is not in chance happening that the mutual idea finds it success, but in the very genius of the theory and principles which underlie it. It grows because it is fundamentally sound; it is in accord with the ideals which are at the heart of American life, and as those ideals find ever more complete and effective expression the mutual movement in insurance marches with them. It is winning America because it is in the very nature of America to respond to it.

Every development of our modern life is tending toward emphasis of the mutual principle. The stream of progress under the direction of science sets with stronger current toward the intensifying of our interdependence. More and more we realize that individuals and groups must live with the help of one another, must prosper in the recognition of common rights and common interests. The old idea of the strong few sustaining itself at the expense of the many weak is passing from the world; the old idea of the intelligent few promoting its own good at the cost of the slower multitude belongs to an era which history records but which the future must obliterate. It is inherent in the growth of civilization, with its increasing intimacies, its multiplying relations, that its security should come to rest upon mutual effort and responsibility.

PRECISELY as the cable is strong because it is woven of many strands, so the mutual idea is strong because it is wrought thru the intertwining of a vast number of individual interests. And every single interest goes in its full strength to the strengthening of the cable as a whole; and the cable as a whole becomes the security of every strand.

Mutual companies seek the advantage of the many at the lowest possible cost to each unit. That is one element which makes powerful appeal to men and women who think of life in American terms. Each contributes his share, not that a special few may profit, but that all may be strong, and in order that the strength of all combined may be the protection of every member. That is the American ideal, written into the charters of our institutions, toward the fuller realization of which the national energies are constantly directed. Every taxpayer is a mutual policy-holder in American government. He makes his contribution on the theory that a certain proportion of his tax shall go to national insurance, to the maintenance of national defense against the hazards of war, and that from the surplus there shall be paid back to him benefits of general improvement or service. If the surplus be big enough to warrant, it comes back to him in lowered taxes, in reduced premiums on his policy. That is the mutual idea. For more than a century it has provided for the progress and security of the country. It is not an experiment. It is the greatest demonstrated success in the history of mankind.

IN fire and casualty field mutual insurance as a special application of this national principle, builds its strength by a selective process. It seeks as units in its mutual groups those who have given evidence of fitness to appreciate its principles and benefits. It shoulders the responsibility for its success squarely upon the policy-holders, who, as the only beneficiaries, are necessarily stimulated to a thrift and care which increases their own profits or lowers their costs. It is an educational factor of the greatest value in promoting prevention of fire and accident.

Nor is it possible to over-emphasize the importance of the growth of mutual insurance as a means of strengthening and stabilizing the whole national economic structure. In the measure in which the hazards of enterprise are adequately provided against by that foresight which we call insurance, in that measure is the business life of the country given confidence and the capacity to remain unshaken when sudden disaster comes. Nothing halts business so quickly as apprehension, and apprehension preys upon the mind when provision for the unforeseen is lacking. Mutual insurance is pooled strength to meet the unexpected mischance of tomorrow; the reservoir of stored water against the day of drouth. Happy is the man who in that day has his pipe line from the reservoir. He can go about his business without worry.

The Journal of American Insurance can afford to be optimistic. These pages have made cheerful and stimulating reading during the past year. In 1928 the outlook is they will have an even better message.

Life Lights Against a Business Background

By S. J. DUNCAN-CLARK

MY friend and I had been attending the regular weekly meeting of the Literary Club. The exercises of the evening at an end we chatted awhile. Then he looked at his watch.

"We have just time to catch the 9:47," he said. "Let's go."

"But there is no train until 10:03," said I.

"Oh, yes there is," he countered. "I looked up the time-table the other day. There is one at 9:47. It will get us home a quarter of an hour earlier."

"All right," I agreed. "If you know your time-table we'll make it."

We were both suburbanites, and these evening affairs downtown cut into our sleep. Conserving 15 minutes was worth while. Saving minutes is always worth while if you have some good use to make of them. As I have remarked before in these articles the only way to save time is to use it to advantage.

A brisk walk in the frosty night air brought us to the station with two minutes to spare. As we passed the information desk my friend queried, with assurance in his voice, "Express north at 9:47?"

"Nothing until 10:03," replied the bored youth, who had been answering similar questions all evening. I grinned unfeelingly at the student of the time-table.

"Nonsense," said he. "I know there is a 9:47. Come on."

I followed. After all my friend might be right. He ought to be right. He was, by vocation, an actuarial expert. Statistical tables were his specialty. It was his business to be right in matters of detailed and precise information, especially where figures were concerned.

We reached the door to the platform, where the usual official stood on guard. Confidently my guide and monitor sought to pass.

"What train?" asked the official.

"The 9:47," answered my friend.

"No 9:47. Nothing until 10:03," said the official with finality.

I grinned again. For the first time the expert in statistics looked disconcerted; but he rallied.

"But there was a 9:47. Has it been taken off?" he demanded.

"Never was," laconically replied the official as he turned to answer the question of some other traveler.

My friend strode across the waiting room to a rack holding time-tables, selected the right one for his destination, ran his eye down it, placed his finger beneath a figure, and called my attention to it.

"I knew I was right," he declared. "See, there it is. Northbound 9:47. These fellows don't know their own time-tables."

Back, in triumph, he hastened to the official.

"There you are," he said. "I was sure there was a 9:47."

"Look at the star and the footnote," said the official.

My friend looked again. After the "9:47" was a small asterisk. He glanced down at the footnote which it indicated. "Sunday only," it said. This was Wednesday.

"What do you know about that?" he exclaimed. "They ought to make those darned stars bigger. Well we're in time for the 10:03 anyway." I grinned for the third time.

THEN he began to moralize about it. And the substance of his remarks as we journeyed out on the 10:03 was something like this:

"That teaches me a lesson—a lesson in the dangers of partial information. As far as I went my facts were right, but I didn't go far enough. I overlooked the asterisk. At my time of life, and considering my profession, I ought not to need such a lesson; but, I guess, none of us is infallible. Certainly there are a lot of fellows I know who are trying to make a success of business and of living on partial information, and most of the failures I have seen have been due to just that cause. A man goes into a deal, attracted by certain features of it, only to discover later that if he had dug a little deeper he would have found other features not nearly so promising. Or a man listens, as you did, to some acquaintance who talks with assurance of great knowledge; he takes his statements without checking them, and learns, perhaps with consequences more serious than you suffered tonight, that his informant was only partially informed.

"I like to give information. I guess all of us do. It tickles our vanity to tell the other fellow something he did not know; but I am afraid often it is really misinformation we are disseminating. Certainly I mean to be more careful in the future. It pays to have all the facts before you talk, and to check up carefully on what you are inclined to assume to be facts—to look for the asterisk and the footnote. Come to think of it there are mighty few facts that do not have an asterisk and footnote attached, something to qualify them, something to limit them to certain times or circumstances. Facts are dangerous things to act on until you know all their relations. I had a fact tonight, but it was related to Sunday instead of to Wednesday, and that made all the difference in its usefulness for my purpose. Four days from now it will be a good and usable fact, but tonight it was useless. My friend, I apologize for misleading you."

I assured him there was no occasion for an apology. We relapsed into silence. Each of us scanned his evening paper as the train rushed on thru the night. We neared my getting off point, and as I folded my paper and prepared to say goodnight, he spoke again.

"YOU know," he said, "the things people want us to believe are usually printed in big type, and the things we ought to know are just as often in fine print. Too many of us are going thru life as mere headline readers. It is the fellows who read the small type who really know."

"Millside," shouted the conductor. The train slowed up and I got off, reflecting that my friend had put a permanent asterisk into my thinking with a footnote warning which it would be well to heed.

Left Out

"What made you oversleep this morning?"

"There are eight in the house, but the alarm was only set for seven."

—*N. Y. C. Magazine.*

Of Two Evils

Fond Parent—"Now, Doris, if you won't kiss your uncle, I shall have to send you to bed."

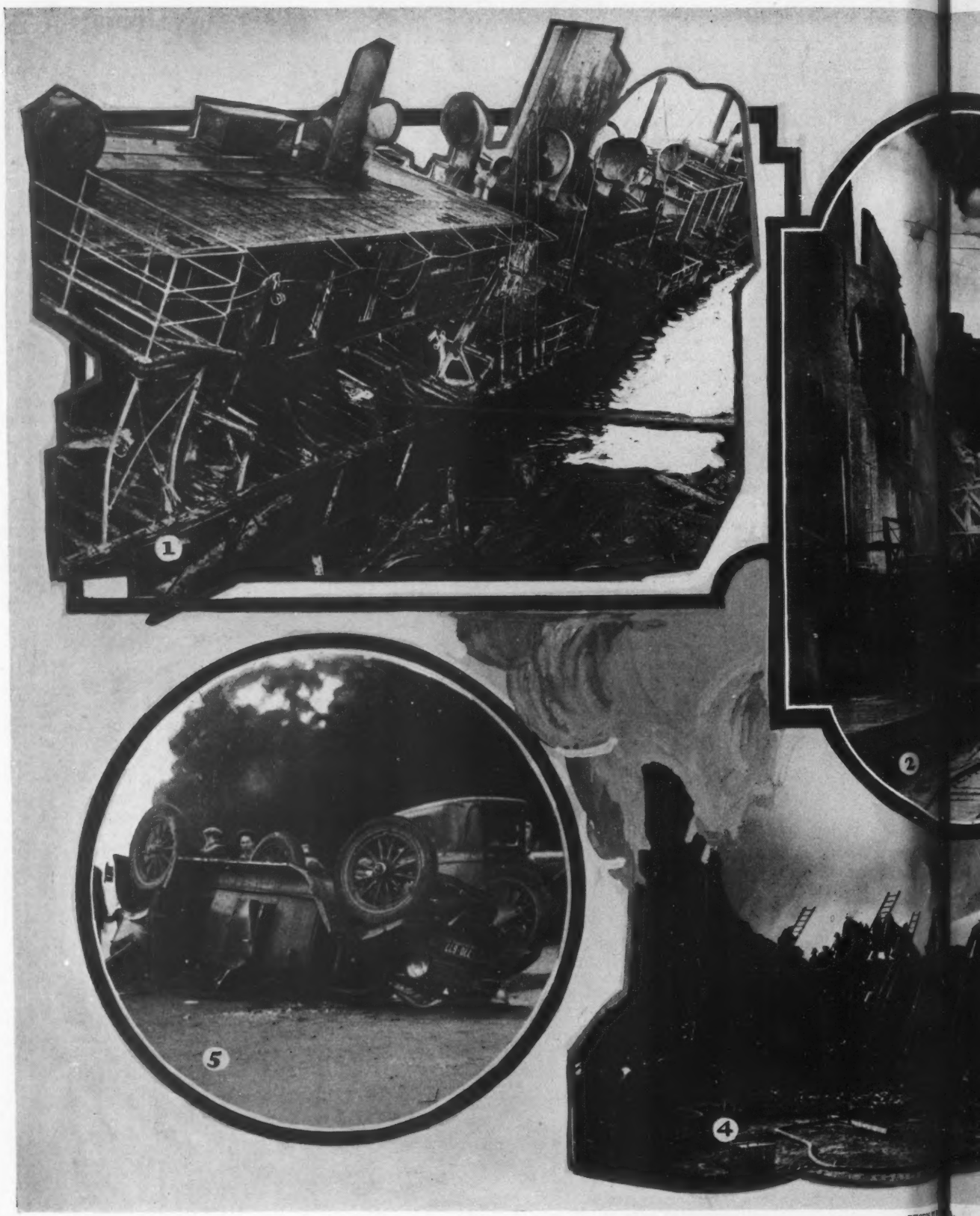
Doris (after a few moments' silence)—"Very well—good-night, mama."

—*The Humorist (London).*

An Afterthought

Professor (after being fished out of the water)—"The worst of it is that I have just remembered that I can swim!"—

—*Notenkraker (Amsterdam).*



PHOTOS BY A.

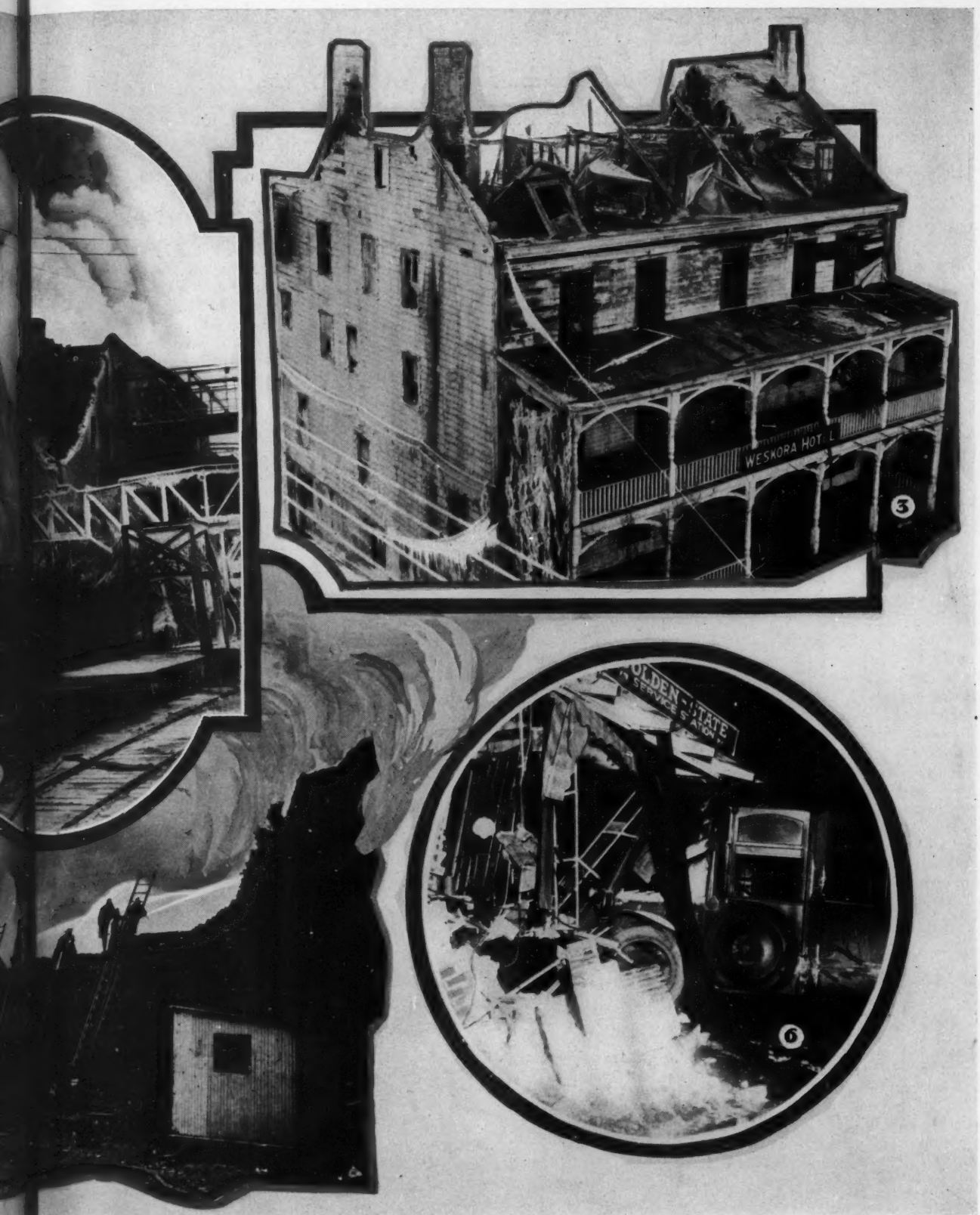
MUTUAL INSURANCE ISSUES POLICIES O C

(1) *FIRE SWEPT SHIP SINKS—What is said to have been a $1,000,000 conflagration in the harbor of Hoboken, N. J., took as its chief toll the S.S. Senaca, bound for a southern trip*

(2) *MILLION DOLLAR BEEF ROAST—Another packing plant in Kansas City went*

(4) *HUNDREDS OF NEW CARS BURNED—display of fire fighting apparatus, but the flames*

(5) *WHEN CAR MEETS CAR—What happened in San Francisco when two automobiles tried to occupy the same spot at the same time. One driver was slightly injured*



O COVER SUCH DISASTERS AS THESE

ated million was lost when the Morris & Company
oke on a blizzardy, four-below-zero day
ze in a New York warehouse brought out a great
with stubborn vigor until immense damage was done

(3) *NO FIRE ESCAPES—An old hotel in Ossining, N. Y., five stories high, burned so quickly that three of the guests lost their lives despite the efforts of the firemen*

(6) *MOTOR COACH SKIDDED—Slippery pavements started this Oakland, Calif., vehicle on a caper during which it struck a street car and then crashed through a service station. Nobody hurt*

Development of Aviation Insurance

Review of Aviation Insurance in the United States

By STEPHEN B. SWEENEY
Assistant Professor of Insurance
Wharton School of Finance and Commerce
University of Pennsylvania

ARTICLE IV—THE INSURANCE OF THE AVIATION HAZARDS

THE demand for aviation coverage now comes principally from the operators of twenty Contract Air Mail routes. These are relatively safe and as such are insurable. In addition there are five hundred odd "free lance" aircraft operators, many of whom are daily attempting to make their enterprises as safe as possible. Business stability of any sort is largely dependent upon the completeness of protection against insurable hazards offered by underwriters. The fact cannot be overemphasized that underwriters as well as operators are jointly responsible for the solution of the aircraft transportation problem.

As in most forms of insurance, the application blank is of vital importance in aviation underwriting. So important are the questions contained therein that the underwriters usually will not consider a request for the insurance against any hazard until a complete answer is given to each question. The application blank is copied verbatim and incorporated in the policy as a "Schedule of Warranties". The answers given thus become an integral part of the contract. Making warranties of each of these vital answers strengthens the position of the underwriter. A warranty must be literally true and the slightest deviation from the exact truth will void a contract based on warranties. This is but just to the underwriters, for each and every question has a direct bearing on the determination of the degree of hazard assumed.

There are as many different application blanks as there are companies writing aviation insurance. All of those examined have a remarkable uniformity. This seems to indicate that there must be much uniformity of thinking on the part of those skilled in aviation underwriting, despite the contention of some of them that their field of insurance must long remain in the realm of the "mysteries".

Photo by P. & A.

Result of a Balky Engine Becoming Unruly in the Sky. Luckily the Pilot Escaped With Only a Few Bruises.

Besides the general information (as to the name of insured, amount of coverage, etc.) requested in all application blanks, we have the following unique to aviation insurance:

1. The territory over which the airplanes will be operated.
2. The safety devices carried on the airplanes and fire fighting apparatus in the plane and in the hangar.
3. The practice of the operator as to periodic overhauls of the engines and the time regularly allowed to elapse between such overhauls.
4. The facilities the operator has for salvaging and repairing airplanes.
5. Any damage that was suffered during test flights of the airplanes.
6. Any novel, experimental or untried features the airplanes in question may contain.
7. Any claims that have been made by the operator, as well as the number and the cost of all accidents suffered by the operator during the previous year.

These inquiries are made more specific by two schedules, one of the aircraft and one of the pilots. The former requests particulars as to manufacture, registry number, crew and passengers normally carried, number of hours flown and the depreciation allowance.

The pilot schedule shows the hours flown in all types of planes, particularly the type to be insured. The pilot's accident history is also required in minute detail.

The above facts are a summary of those requested prior to the issuance of aviation property insurance. Practically the same information,

however, is required from the applicant for any form of aviation insurance. Even a personal insurance (i. e. life and accident) applicant must give such details as the type, make and age of the aircraft in which flight is contemplated. The requirement that the pilot must be named reminds us of the obsolete marine insurance requirement that the captain of the vessel must be named and accepted by the underwriter before the coverage is complete.

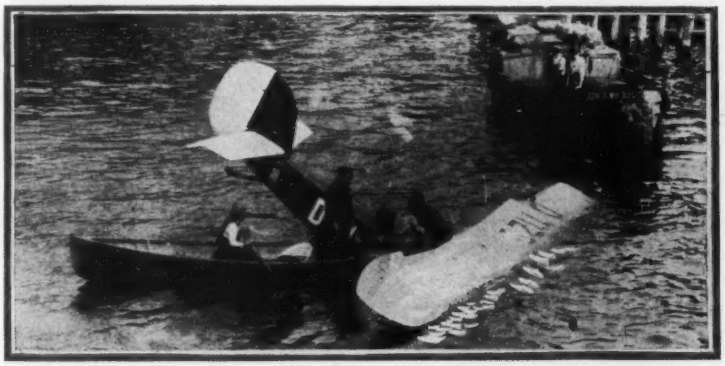
It will be recalled that the term property hazards has been used broadly in these articles to include those surrounding the aircraft and ground facilities, the cargo, and finally, the hazard of destruction of the insured's buildings, etc., by a crash of a strange aircraft. Even the most conservatively restricted mutuals may be drawn into the field of aviation insurance by their fire risks requesting extension of their policies to cover the last named hazard.

The coverages for the aircraft are four: First — fire, lightning and transportation; second — accidental damage, (very often called "crash insurance"); third—tornado, cyclone and windstorm; and fourth—theft, robbery and pilferage. These insurances are granted separately or as a unit under what is called a "Combination Policy."

Of thirty-six conditions found in a more or less typical aircraft policy, twenty-three are identical with or closely similar to the conditions found either in the New York Standard Fire Policy or in the typical automobile fire, theft and transportation policy. These twenty-three familiar conditions relate to warranties by the insured, the exclusion of extra property, other insurance, cancellation, limitation of liability to actual cash value, exclusion of the war hazard, abandonment, losses for which bailee for hire is liable, definition of noon, misrepresentation and fraud, title, assignment before a loss, encumbrances, renting or leasing, racing or speeding, protection of salvage, co-operation of the insured in the recovery of insured property, proof of loss, subrogation, appraisal, payment of loss, suit against the company, and the terminal clause emphasizing the warranty basis of the contract and limiting the powers of agents as to waivers, etc.

A 100% coinsurance clause is usually present. This gives rise to some complicated figuring of depreciation because of the nature of the risk. Usually there is an advance agreement that the depreciation of the airplane and the engine will be determined by the number of hours flown before the claim. The hours allowed (before the planes and engines become valueless "insurance wise") may range from five hundred to nine hundred, according to the liberality of the underwriter. Re-

(*Continued on page* 30)



Lots of Excitement But Nobody Hurt When This Plane Fell Into the Hudson

Photo By P. & A.

Swarms of People Crowding on a Landing Field Worried the Pilot, Until This Odd Accident Occurred

MONTH	YEARLY PERIOD	FIRST SECTOR FROM N TIMES-NO.	FIRST SECTOR FROM N DAYS-NO.	SECOND SECTOR FROM E TIMES-NO.	SECOND SECTOR FROM E DAYS-NO.	THIRD SECTOR FROM S TIMES-NO.	THIRD SECTOR FROM S DAYS-NO.	FOURTH SECTOR FROM W TIMES-NO.	FOURTH SECTOR FROM W DAYS-NO.	FIFTH SECTOR FROM NE TIMES-NO.	FIFTH SECTOR FROM NE DAYS-NO.	SIXTH SECTOR FROM SE TIMES-NO.	SIXTH SECTOR FROM SE DAYS-NO.	SEVENTH SECTOR FROM SW TIMES-NO.	SEVENTH SECTOR FROM SW DAYS-NO.	EIGHTH SECTOR FROM NW TIMES-NO.	EIGHTH SECTOR FROM NW DAYS-NO.	MONTHLY TOTALS BY SECTORS DIRECTION TIMES NO.	MONTHLY TOTALS BY SECTORS RAINFALL DAYS NO.	MONTHLY MEAN DIRECTION
AUGUST	YEARS	ZERO	ZERO	1	1	ZERO	ZERO	8	4	21	7	ZERO	ZERO	ZERO	ZERO	15	7	45	19	NE
SEPTEMBER	YEARS	1	1	ZERO	ZERO	ZERO	ZERO	8	4	12	6	ZERO	ZERO	ZERO	ZERO	8	5	29	16	NE
TOTALS	40	1	1	1	1	ZERO	ZERO	16	8	33	13	ZERO	ZERO	ZERO	ZERO	23	12	74	35	33
AVERAGES	20	0.5	0.5	0.5	0.5	ZERO	ZERO	0.8	0.4	16.5	6.5	ZERO	ZERO	ZERO	ZERO	11.5	6.0	37.0	17.5	16.5

PLATE VII—Direction and Frequency of Rainfall Spread—Summary. August and September, 1905-1924. Correlation by Months and Sectors, for a Period of 20-years (1905 to 1924 Inclusive) for a Tenth of An Inch or More of Rainfall (2P. M. to 9 P. M.) at the U. S. Weather Bureau Station, New York City.

REMARKS—The Direction of the Rainfall Spread Is Developed from the Daily Rainfall Graphs, Plates I to VII, Inclusive for Each Month. The Underwriting Importance of the Rainfall Spread Is Discussed in Article No. II of This Series. The Symbol "Zero" Shows That There Were No Rainfall Spreads from the S., SE. and SW. Sectors of the Rainfall Area. There Was Only One Spread Each for the N. and E. Sectors. The Former in September and the Latter in August. Both Rainfall Spread and Rainfall Occurrence Decrease Gradually from August to September.

NOTE—*Observations Made by Automatic Self-Recording Raingage and Checked with a Direct-Measurement-Non-Recording Raingage. Both U. S. Weather Bureau Standard Instruments Located on the Roof of the Station Building, New York City, 394 Feet Above Sea-Level. Values Transferred from Spaced and Timed Instrument-Record-Sheets After Being Converted Into Comparable Figures and Verified for Tabulations.*

The Rainfall Hazard

Fundamental Factors Related to This Weather Risk and Their Practical Application to Underwriting

By COLONEL JOHN P. FINLEY

Consulting Meteorologist and Manager National Storm Insurance Bureau, New York City

Article IV. Rainfall Diurnals.

Tenth Section Continued

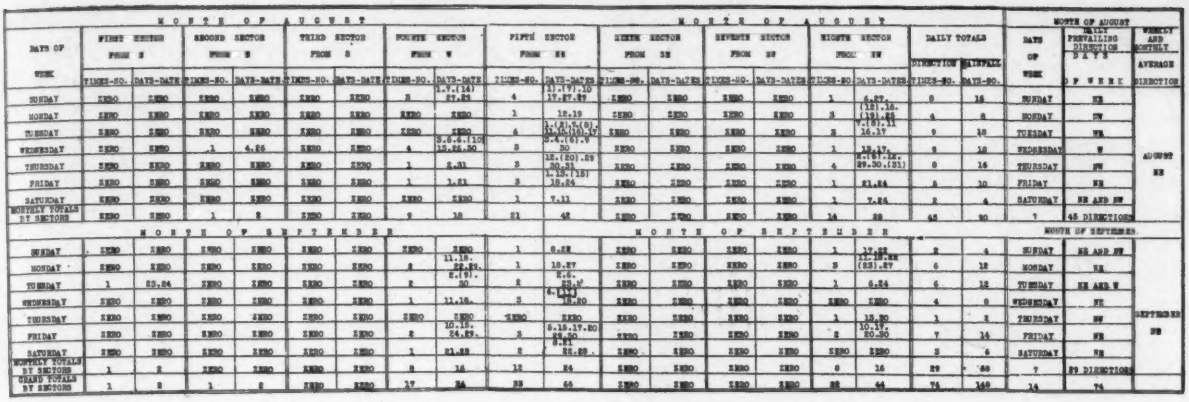
While these observations, on testing, for the electric charge in rainfall, and in snowfall were being obtained, a number of well-devised experiments were made to determine the electrical effect of each obvious process that takes place in the thunderstorm. Freezing and thawing, air-friction and other things, were tried, but none produced any electrification. Finally, on allowing drops of distilled water to fall through a vertical glass of air, of sufficient strength to produce some spray, positive and important results were found, showing:—

1. That breaking of drops of water is accompanied by the production of both positive and negative elements (ions) that pass to the poles, in the process of electrolysis.

2. That three times as many negative ions, as positive ions, are released.

These results are most important, in view of the fact that a strong upward current of air is one of the most conspicuous features of the thunderstorm. This upheaval is always evident in the turbulent motions of the giant heads of the cumulus clouds that are the outward, visible sign of thunderstorm development. Moreover, this turbulent condition is exhibited and proved by the occurrence of hail, a frequent thunderstorm phenomenon, whose formation requires the carrying of rain-drops and the growing hailstones, repeatedly upward, to cold, and therefore high altitudes. Under these conditions an updraft of at least eight meters per second, must occur. Experiments show that rain cannot fall through air of ordianry density, whose upward velocity is greater than about eight meters per second, or itself fall with greater velocity through still air. In such a current, or with such a velocity, drops large enough to force their way down, or through the action of gravity, to attain a velocity of eight meters per second, or more, are so blown to pieces that the resulting spray is carried aloft, or left behind, together with all the original smaller drops. It is therefore evident that the updrafts, within a cumulus cloud frequently must break-up, at about the same level, myriads of drops, which through coalescence, have grown beyond the critical size, and thereby, according to Simpson's experiments, produce electrical separation, within the cloud itself. Obviously, under the turmoil of a thunderstorm, the drops of condensed vapor, may be forced through the cycle of union and division, of coalescence and disruption, from one to many times, with the formation at each and every disruption of a correspondingly increased electric charge. The turbulence compels mechanical contact between the drops, whereupon the electric charges break down the surface tension and insure coalescence. Hence, once started, the electricity of a thunderstorm is perpetuated and grows to a considerable maximum. The Simpson experiments demonstrate that the heavy rain of a thunderstorm is positively charged, and the gentler portions negatively charged, and these are the facts recorded in confirmation of the observations. The Simpson experiments and theory of the origin of the electricity, in thunderstorms, have been abundantly supported by laboratory tests, and simulative experiments. Therefore, the one essential to the formation of the towering cumulus cloud, viz:—The rapid uprush of moist air, is also the one essential to the generation of the electricity of thunderstorms. Hence, the reason why lightning seldom, if ever, occurs, except in connection with a cumulus cloud, for the only process that can produce the one is also the process that is necessary and sufficient for the production of the other.

From observations, and from the graphic descriptions of the few balloonists, who have experienced the trying ordeal of passing through the heart of a thunderstorm, it is known that there is a violent vertical motion, and much turbulence in the interior of a large cumulus cloud. We have already shown how this motion is related to the formation of hail. It is also important to add that the violent motions, in large cumulus clouds, motions having great vertical



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from a more or less super-adiabatic temperature gradient. It is this gradient, no matter how established, whether by simple surface heating, or by the over and under running of layers of air of widely different temperatures, that permits or rather forces, the production of the cumulus cloud, in which and by the motions of which, the electricity that characterizes the thunderstorm, is generated.

It is important to bear in mind that the passage of a cumulus cloud overhead, however large, it may be, so long as no rain is falling from it, does not greatly affect the direction and magnitude of the surface wind, nor does it bring on any of the familiar gusts and other thunderstorm phenomena. Therefore, the rain is an important factor, both in starting and in maintaining the thuderstorm winds, for they do not exist before the rain begins, nor continue after the rain has ceased. In this connection, it cannot be assumed that the rain is the whole cause of the thunderstorm winds, for they do not accompany other and ordinary showers, however heavy the downpour may be. The thunderstorm winds grow the storm itself and bear a peculiar relation to the electrical origin of these disturbances.

Thunderstorms may be classified according to their periodic recurrence. While they may develop at any hour of the day they nevertheless have three distinct periods of maximum occurrence:—(1) Daily, (2) Yearly and (3) Irregular Cyclic, Each maximum depends upon the basic facts that the more humid the air and the more rapid the local vertical convection, the more frequent and also the more intense the thunderstorms, naturally, for the reason that it is rapid vertical convection of humid air that produces them.

The Daily Land Period:—This period reaches its maximum of continental thunderstorms between the hours of 2 and 4 P. M. because the vertical convection produces the heaviest condensation and largest cumulus clouds during the afternoon at the hottest part of the day.

The Daily Ocean Period:—This period, for reasons already explained, principally the high specific heat of water, reaches its maximum of thunderstorm occurrence between midnight and 4 A. M.

The Yearly Land Period:—This period reaches its maximum thunderstorm occurrence during the hottest months of the year, when the amount of the surface heating and the vertical temperature gradient are at their maximum.

The Yearly Ocean Period:—This period reaches its maximum thunderstorm occurrence in the winter when temperature gradients become most favorable to vertical convection. The average decrease of temperature with increase of elevation is least in summer when thunderstorms are fewest, and greatest in winter when thunderstorms are most frequent.

The Cyclic Land Period:—This period reaches its maximum thunderstorm occurrence in warm and wet years, and its minimum occurrence in cold and dry years, dependent upon the variations of vertical convection.

The Cyclonic Ocean Period:—This period reaches its maximum thunderstorm occurrence in cold and dry years, and its minimum in warm and wet years. The former is most favorable to vertical convection over large water areas. The observations to confirm these conclusions are not as complete as in the case of the Cyclic Land Period.

CONCLUSIONS.

The following important insurance lessons are to be derived from the analytical discussions in this Article.

(*Continued on page 27*)

DAY OF WEEK	NUMBER OF DEVIATIONS IN RAINFALL CURVE	NUMBER OF SEPARATE DAYS OF RAIN	DAYS OF MONTH ON WHICH RAIN FELL	NUMBER OF DAYS OF NO RAINFALL	AMPLITUDE OF DAILY RAINFALL CURVE	NUMBER OF DAYS IN AMPLITUDE	** YEARS OF RAINFALL	TOTAL YEARS OF RAINFALL	NUMBER OF REPEATED RAINFALL DAYS OF MONTH	NUMBER OF REPEATED RAINFALL YEARS
SUNDAY	5	6	1.6.7.10.14.17.(27).29	25	1st to 29th	29	1908.1911.1913(1918) 1919.(1921).1922	7	1	2
MONDAY	8	4	12.(16).19.25	27	12th to 25th	14	1924 1908.1912.1918.1920./	5	1	ZERO
TUESDAY	6	8	1.2.7.8.(11) (16).16.17	25	1st to 17th	17	1908.1906.1908.1910.1911 1914.1916.1920.1921.1922	10	2	ZERO
WEDNESDAY	8	10	2.4.6.6.9.10.12 17.26.30	22	24 to 30th	20	(1908).1909.(1910).1911. 1916.(1919).1921.	7	ZERO	2
THURSDAY	6	7	2.6.12.20.29. 30.(31)	24	26 to 31st	30	1906.1908.1911.1914.1918 1917.1918.1922	8	1	ZERO
FRIDAY	4	6	1.13.16.18. 21.24.	25	1st to 24th	24	1911.1913.1914.1917. 1919.1920	6	ZERO	ZERO
SATURDAY	2	3	7.11.26.	26	7th to 26th	20	1906.1920.1922	3	ZERO	ZERO
TOTALS	54	44	44	178	27----182	182	44	44	5	5
AVERAGES	4.84	4.87	4.87	24.0	3.04---26.0	23.1	4.87	4.87	0.71	0.71

PLATE IX—Correlation of Daily Rainfall Curves in—August, 1905 to 1924. For the Weekly Period, Sunday to Saturday, Inclusive. Rainfall of a Tenth of An Inch or More for the Hours 2 P. M. to 9 P. M. During Twenty Years (1905 to 1924 Inclusive) at the U. S. Weather Bureau Station of New York City.

*Correlation of Daily Rainfall Curves in August for the Weekly Period, Sunday to Saturday, Inclusive. Rainfall of a Tenth of An Inch or More for the Hours 2 P. M. to 9 P. M. During 20 Years (1905 to 1924, Inclusive) at the U. S. Weather Bureau Station of New York City. Explanation of Symbols:—Numbers Enclosed in Brackets ( ) Show One Repeat or Two Occurrences. Numbers Enclosed in a Square [ ] Show Two Repeats or Three Occurrences. The Column Headed, "Number of Days of No Rainfall," Means Days on Which the Rainfall, If Any Occurred, Was Less Than One-Tenth of An Inch, Between the Hours of 2 P. M. and 9 P. M. *The Days of the 22nd, 23rd and 28th of August Had No Rainfall from 2 P. M. to 9 P. M. of a Tenth of An Inch or More, During the 20-Year Period, 1905 to 1924, Inclusive. All of the Other Days of the Month Are Represented by Precipitation Within the Prescribed Limits. **The Years 1907 and 1923 Had No Record of Rainfall in August, from 2 P. M. to 9 P. M. of a Tenth of an Inch or More. All of the Other Years of the 20-Year Period Are Represented by Precipitation Within the Prescribed Limits.*

DAY OF WEEK	NUMBER OF DEVIATIONS IN RAINFALL CURVE	NUMBER OF SEPARATE DAYS OF RAIN	DAYS OF MONTH ON WHICH RAIN FELL	NUMBER OF DAYS OF NO RAINFALL	AMPLITUDE OF DAILY RAINFALL CURVE	NUMBER OF DAYS IN AMPLITUDE	** YEARS OF RAINFALL	TOTAL YEARS OF RAINFALL	NUMBER OF REPEATED RAINFALL DAYS OF MONTH	NUMBER OF REPEATED RAINFALL YEARS
SUNDAY	2	3	2.17.22	27	2th to 22d	18	1906.1907.1918.	3	ZERO	ZERO
MONDAY	6	6	11.(16).22.23 27.29	24	11th to 29th	19	(1906).1907.1909.1918. (1922).	5	1	2
TUESDAY	8	8	2.6.9.23.(24). 30	24	2d to 30th	20	1907.1910.1912. 1918.(1922)	6	1	1
WEDNESDAY	4	4	6.(11).18.20	26	6th to 20th	15	1906.(1907).1918.1922	4	1	1
THURSDAY	1	2	13.20	28	13th to 20th	18	1906.1920	2	ZERO	ZERO
FRIDAY	7	8	5.10.15.17.20 24.27.30	22	5th to 30th	25	(1909).1915.(1916). 1918.1921.1924.	6	ZERO	2
SATURDAY	3	4	8.21.22.28	26	8th to 28th	21	1906.(1907).1922	3	ZERO	1
TOTALS	28	35	35	177	25----182	144	28	28	3	7
AVERAGES	4.0	4.71	4.71	25.28	1.07—27.0	20.57	4.0	4.0	0.42	1.0

PLATE X—Correlation of Daily Rainfall Curves—September, 1905-1924. For the Weekly Period, Sunday to Saturday, Inclusive. Rainfall of a Tenth of An Inch or More for the Hours 2 P. M. to 9 P. M. During Twenty Years (1905 to 1924 Inclusive) at the U. S. Weather Bureau Station of New York City.

*Correlation of Daily Rainfall Curves in September for the Weekly Period, Sunday to Saturday, Inclusive. Rainfall of a Tenth of An Inch or More for the Hours 2 P. M. to 9 P. M. During 20 Years (1905 to 1924, Inclusive) at the U. S. Weather Bureau Station of New York City. Explanation of Symbols:—Numbers Enclosed in Brackets ( ) Show One Repeat or Two Occurrences. Numbers Enclosed in a Square [ ] Show Two Repeats or Three Occurrences. The Column Headed, "Number of Days of No Rainfall," Means Days on Which the Rainfall, If Any Occurred, Was Less Than One-Tenth of An Inch, Between the Hours of 2 P. M. and 9 P. M. *The Days of the 1st, 3rd, 4th, 7th, 12th, 14th, 16th, 19th, 25th and 26th of September Had No Rainfall from 2 P. M. to 9 P. M. of a Tenth of An Inch or More, During the 20-Year Period, 1905 to 1924, Inclusive. All of the Other Days of the Month Are Represented by Precipitation Within the Prescribed Limits. **The Years 1908, 1911, 1913, 1914 and 1917 Had No Record of Rainfall in September from 2 P. M. to 9 P. M. of a Tenth of An Inch or More. All of the Other Years of the 20-Year Period Are Represented by Precipitation Within the Prescribed Limits. This Analysis of Rainfall Occurrence Shows a Steady Decline from May to September, Inclusive.*

Photo by U. & U.

When Wheat and Oats Yield Heavily the Potato or Corn Crop May Be a Failure

Crop Hazards and Their Insurance

Continuing A Series of Articles On the History Of Efforts to Offer the Farmer Protection Against Years of Failure

By G. Wright Hoffman, Ph. D.

Assistant Professor of Insurance, Wharton School of Finance and Commerce, University of Pennsylvania.

ARTICLE III

CROP insurance has had a colorful history. Judged by the ledger accounts of the underwriting companies, the predominating color, up to and including the year 1920, was red. Since 1920, however, the experience has been more favorable and gives promise of developing, at least on a small scale, into a successful line of insurance. This recent experience will be reviewed in this article, together with a summary reference to the future development of the field.

New Features in Crop Insurance

Since 1920, the trend in crop insurance has been characterized by three distinct movements. In the first place, attempts to cover, over a wide area, the major crops of grain and cotton have been abandoned and instead the field has been limited to selected areas where more intensive farming in vegetables and fruits is carried on. Secondly, instead of placing the insurance directly with the farmer, it is becoming more and more the practice to handle it through cooperative organizations. Thirdly, the insurance has been used mainly for credit purposes.

Areas and Crops Covered

BY limiting the development of crop insurance to regions where a more intensive type of farming is maintained, the insurance company has been able to place a considerable volume of insurance within a compact and fairly homogeneous area. This has the obvious advantage of superior supervision. In the earlier experiments where the insurance was placed directly with individual farmers, and spread over large areas, and with crops having a much smaller value-yield per acre, the company encountered one of its leading difficulties in the proper placing of the insurance. There was a constant desire on the part of the applicant to get more insurance per acre on his crops than the quality of the soil and past records of yields would warrant. The rate was not considered if the limit of liability was high enough to guarantee a good yield.

This "human equation" hazard was especially great in insuring grain crops since in many instances a paying yield will not be produced unless proper cultivation is maintained. Where the insurance is limited to smaller areas and to crops having a fairly high yield in value per acre, the proper placing and supervising of the insurance is greatly improved and a much larger margin of safety on the contract can be obtained. It is clear, however, that the company by this method is subjecting itself to unusual risks in the form of a sweeping storm that would be less disastrous with a wider spread.

The areas and crops in which this insurance has been developed within recent years, and with some measure of success, include selected regions in several states of the South, and on the Pacific Coast. The list includes fruit and truck crops of tomatoes, celery, peas, etc., principally in the Carolinas, Georgia, and Florida. It includes sugar cane in Louisiana. Rice has been insured during the past season in selected areas in Texas and Louisiana. Long Staple cotton has been covered in the Yuma district of Arizona and in Southern California. On the Pacific Coast, the list of crops covered includes the citrus crops of Southern California (principally to protect against the frost hazard) grain, and truck crops in central and northern California and fruit (principally apples) in Washington and Oregon.

The list of crops and areas just presented appears formidable. Compared with the development in other lines of insurance and with the possibilities in this field, however, it is only a start, though it is a rather

promising one. The few companies now in the field are in no measure competing for the business, but rather limiting their volume to selected risks in selected areas in an attempt to gradually develop a profitable and dependable business.

Insurance Placed Through Cooperative Organizations

IT has been found that better supervision is also obtained by issuing the insurance to cooperative organizations rather than direct to the farmer and to an increasing extent this is becoming the practice. The contract takes the form of a blanket or master policy upon which the cooperative organization issues certificates of insurance to its members. The company is thus assured of a considerable volume of insurance, covering a period of two or three years, and placed with a single supervising organization which is either a cooperative marketing association or an association organized especially to provide credits or advances to its members. This association is financially much more responsible than the average farmer; and adjustments of loss are generally more equitable when made thru a central organization of this kind.

No uniform policy is used by the insurance company because of the diversity in types of crops and conditions demanded by each organization. The insurance usually covers, however, all of the crop hazards including frost, drought, storms, plant disease and animal pests. In practical operation, the risk of a market decline in price is, also, sometimes included though this hazard is not enumerated in the insuring clause. It thus guarantees to the insured at least a minimum return on his crop, the amount of insurance per acre being a conservative figure but at least enough to enable him to put in a crop the following year.

Insurance Used As Collateral for Credit

TO an increasing extent it has become the practice in recent years to use crop insurance to secure additional credit from banks or finance corporations, the policy serving as collateral for the loan. Where this is done, the immediate benefit from the insurance redounds to the lender, the policy being taken out by the loan company and covering the major part or all of its advances to the farmer. Indirectly and fundamentally, however, the benefit of the insurance goes to the borrowing farmer and its expense becomes a part of his carrying charges on the loan.

Assume, for example, that a rice grower farms land capable of yielding a normal crop of $80 per acre in value. Being unable to finance the crop, he turns to his local banker for credit. The credit is arranged with the understanding that advances are to be made as needed during the crop season up to, say, $40 per acre, such advances to be used only for actual outlays on the prospective crop: for fertilizer, seed, sowing, cultivating, etc., and to be repaid from the proceeds of the crop.

If these advances are to be paid in the fall, it is clear the farmer will need to realize at least a half a crop at a market price near that which prevailed at the time the advances were made.

The risk which both farmer and banker run is that of a substantial failure, placing the farmer in a position of being unable to carry on another year and the banker of being unable to collect his loan. If insurance is taken out by the banker, it will be to cover these advances, or at least 75 per cent of the total amount advanced, with a definite maximum limit of, say, $30 or $40 per acre. If a total loss then occurs, the banker will be reimbursed for his loan, or the major part of it, and the farmer in turn, having his loan correspondingly decreased, and being in a position to borrow, can carry on another year.

The cost of this insurance is, of course, added to the price paid by the farmer for his credit. Without a crop policy, he will usually pay from 6 to 8 per cent. With the insurance premium added, his charges will amount to from 11 to 14 per cent. This seems like a high rate to pay, and it is high, but, when compared with the increased costs many farmers pay on open accounts with local merchants and with the unusual strain of a complete failure which occasionally occurs, it is believed to be worth the price.

A Credit Crop Contract

A CONTRACT used during the past season covering rice and meeting the requirements of the illustration just given will be briefly summarized.

The insuring clause covers loss or damage resulting from wind, excess moisture, drought, insects or disease but excepts any form of negligence or inability on the part of the applicant or grower to properly handle the crop such as ample provision for labor, harvesting and marketing facilities. Then follows a form for the description of the crop including acreage, variety of rice, amount to be advanced per acre and a summary column for total insurance which is the amount advanced per acre multiplied by the total acreage.

There follows several interesting warranties by the applicant including a statement:

1. That the applicant holds a crop mortgage as a first lien on the insured crop.

2. That the crop insured is the entire crop in which the applicant has any interest.

3. That neither the crop nor the land has been damaged by any of the perils insured against prior to the date of application.

4. That the mortgagor and/or the applicant will be responsible for the proper care of the insured crops.

Important descriptive conditions of the contract read:

"The purpose of this insurance is to indemnify the assured against loss or damage, as hereinbefore provided, and as elsewhere limited, to an extent not exceeding the amount by which the proceeds realized from any cutting, prior to the termination of this contract, of crop or crops on the insured acreage, may be less than the actual amount of the assured's interest as represented by advances made to the owner (subject to limitations as below set forth) plus interest collectible from the owner."

"This company shall not be liable for any greater amount of loss or damage per acre than the amount per acre which the assured has actually advanced to the grower, and which the grower has actually spent in making, and harvesting his crop, up to the date of occurrence of loss or damage."

There are provisions relating to reporting of a loss, the keeping of adequate records of the amounts realized on the crop and the usual other conditions common to insurance con-

tracts. In addition, the company may cancel the contract covering the entire acreage or any portion thereof upon return of the unearned premium prior to June 15 if a poor stand is in prospect.

This epitome is sufficient to show the important characteristics of this contract. Used by the banker as collateral for credit, it serves the additional and more fundamental purpose of insuring the farmer at least a fractional part of the value of a prospective crop, a fraction sufficient to cover the major part, at least, of his prime costs of production.

It should be observed that while it is, thus, possible to insure the major part of the prime costs of production in rice and in the intensively-farmed truck areas and in fruit, it is a much more difficult task in the major crops of grain and cotton where the margin between ultimate market value and costs is a much more slender one. This emphasizes, also, the extreme importance of insuring only those crops and areas which are cultivated by competent farmers; for the more incompetent the farmer the greater crop values. There is, too, a natural desire on the part of this type of farmer to insure.

The Hazard of a Decline in Market Price

IN addition to insuring against specifically enumerated hazards of weather and plant disease such as was done in the contract just summarized, some companies have so worded their contracts that they insure, in a measure, against a market decline in the price of the product when accompanied by damage caused by one or more of the enumerated hazards. Thus, assume a crop to be insured up to $40 per acre with a crop in prospect of $80 per acre at prevailing prices. At harvest time a fair crop has been produced but a drop in the market has reduced its value to $50 per acre. If, then, damage by storm reduces the value of the crop below $40, the company would become liable for the difference between the remaining value of the crop and the insured value of $40 per acre, assuming that the full amount had been spent in producing the crop. This liability, it is clear, has been caused in part by the storm, but in part also, by an unforeseen market decline.

The problem of properly handling this market hazard is a very real one in crop insurance. The disastrous experience of 1920 is not easily forgotten, and some of the pioneers in the field, in particular, feel that it should not be covered.

There is being launched for the season of 1928, a plan of crop insurance on the Pacific Coast in which the contract definitely eliminates the price hazard. This is not the first instance in which this hazard has been excepted; but it is the first instance in which a contract has been framed which definitely eliminates this hazard without employing rather devious and ambiguous provisions.

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A Pacific Coast Plan

THE provisions of the Pacific Coast contract which have a bearing on the price hazard can best be presented by applying them to a specific example such as grain in Washington. The applicant is asked to enter an estimate of the average price per bushel of his prospective crop. Assuming his crop to be 100 acres of wheat, he will enter an estimated price of say $1.20 per bushel. The company then insures, as a basic figure, 50 per cent of this $1.20 estimate, or $.60. The applicant also estimates the probable yield of his prospective crop which might be 25 bushels per acre. Multiplying this yield by the $.60 gives a limit of insurance per acre of $15.00 which, when multiplied by the acreage, gives a total amount of insurance of $1500. The premium varies with the section of the state from $3 to $8 per $100 of insurance. It is modified, also, by certain surcharges made for special endorsements and credits given for irrigated land and for a percentage below the 50 per cent used above as a basic figure.

The policy then provides:

"That in the event of loss hereunder in accordance with the terms and conditions hereof, if it shall be determined upon the adjustment of any such loss that the average of the prices per unit F. O. B. *(at shipping point)* during the period from *July 1, 1928* to *Sept. 15, 1928*, received for *grain* of like kind and of quality and grade similar to that which said crops would have produced, had no such loss or damage thereto occurred, is less than the average price per unit hereinabove estimated by the applicant, the amount of insurance applying per unit shall be reduced in the same proportion that the ascertained deficiency in such actual average price per unit bears to the estimated average price per unit, the amount of insurance applying per acre and the limit of insurance applying on said crops to be reduced accordingly, ratable proportion of the premium to be returned to the applicant in the event of such reduction in the amount of insurance."

This provision limits the policy to a guarantee that the farmer will raise at least a half-crop and receive for it the average price prevailing during the season. It is apparently an attempt to place crop insurance on an indemnity basis similar to that in fire insurance,—adjusting the liability at the time of loss in the light of prevailing market values. As long, however, as the original amount of insurance covers only an estimated 50 per cent or less of prospective values, it hardly seems necessary to make a subsequent adjustment to be sure that payment is made for losses actually sustained. These losses may, however, and occasionally will be, due in part to a decline in the market.

Summary

THE experience to date in crop insurance is not unlike that of other new lines of economic endeavor. Certain features have proved desirable, certain others have not, while others remain for additional testing. Some of the undesirable features in this type of insurance have already been stressed and it will be necessary here only to briefly review the salient points which appear to be necessary to a sound development of this line.

It is somewhat trite to say that a prerequisite to the success of this insurance is salability. The importance of this point, however, warrants final emphasis. The insurance should be attractive to the better class of farmers and the insured should be, to a considerable measure, the same group each year. Stated negatively, it should not attract the shiftless farmer who occasionally "tries out" the insurance to see if the benefit received cannot be made to exceed the premium paid. To attract desirable risks

(*Continued on page 29*)

Automobile Insurance

(*Continued from page* 13)

Theft insurance is now viewed in an entirely different light by the issuing insurance companies from the way in which it was regarded in the beginning. Two decades ago, the business of stealing cars had not yet emerged; cars were few in number, they were easily identified, and there was no organized business for spiriting them away from the owner. So lightly did some companies view the theft hazard in these earlier days of motor car insurance that, it is said, the theft coverage was at times added to the fire policy without asking any additional premium. But times have changed. Nowadays, inasmuch as eight to ten automobiles per hour on the average are stolen for each hour of the day throughout each year, the insurance companies view the theft hazard as a very serious matter; and on those types of cars the ownership of which can not so easily be established the cost of theft insurance has become relatively great.

The public liability type of automobile insurance is said to date practically from the very beginning of the car as a commercial venture. Automobiles from the first experiments with them have been recognized as a tremendous potential possibility for inflicting injury upon or causing death to third parties, to say nothing of their power to harm the owner himself; so that the demand for public liability coverage has practically always been strong. It is probably fair to say that the average automobile owner thinks more of his public liability coverage than all other forms of automobile insurance that he carries. We have seldom heard a man complain of the rates charged for the public liability feature of his insurance, for he realizes that this is a risk entirely too great for him to assume himself, especially if he is a responsible citizen.

Considerable change has been brought about in the public liability policy since its inception. The tendency has been in the direction of broadening the coverage, and in educating the public up to the point of buying a much larger coverage than was formerly the case. Time was when the total limit of liability assumed by the insurance company under a single policy was $2,500. Nowadays it is common for the insured to purchase the $5,000-$10,000 coverage, although in very recent times, $25,000-$50,000 policies, or even larger ones, are coming into demand. It is possible that the movement in this direction may not end until the principal sum will be eliminated entirely from the policy, the insured buying, for a due consideration, a policy giving him unlimited coverage—coverage up to any amount which, in case of serious accident to a third party, a court of competent jurisdiction might assess against the insured.

PROPERTY damage, a form of insurance well described by its name, emerged with respect to the automobile about 1900. Originally the coverage did not extend to the loss of use of the property injured by the automobile, but it was not long before this feature was added. For many years the maximum amount of this insurance usually bought was $1,000, but in more recent times, with the rise of the general price level and of the cost of effecting repairs, the public is becoming educated up to the necessity of increasing the amount of this form of coverage. An important feature of the modern property damage insurance, as related to automobiles, is what is known as the "omnibus endorsement," whereby the insurance holds when the car is being driven for pleasure or business by any one who has been granted permission by the insured to drive the car. It is hardly necessary to add that property damage does not hold in races or if the operator is under the legal age limit for drivers.

The writing of collision insurance, authorities state, dates from about 1907 so far as American casualty companies are concerned. Soon it was written also by fire and marine companies. Full collision coverage was not given from the first, the twenty-five dollar deductible form of policy being the usual type—the company not being responsible for damages in a collision when the amount

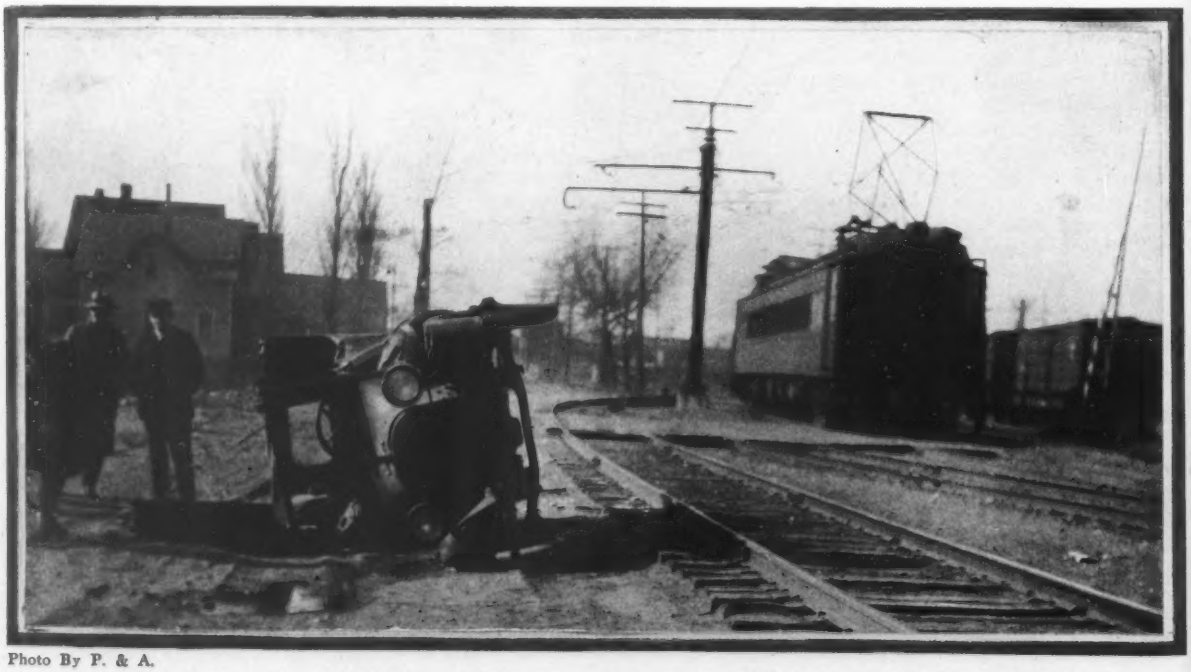

Photo By P. & A.

Demonstrating That No Matter How Self-Confident the Driver, An Auto Cannot Successfully Dispute the Right of Way with a Trolley Car

of the damage was under twenty-five dollars, and only for the excess above this amount in more serious accidents. When it was found by experience that a high percentage of the claims were in excess of twenty-five dollars, rates had to be increased to meet the situation. In time, the demand came for full collision coverage, so this form of insurance was offered by the companies, the twenty-five dollar deductible plan being still sold to those who demanded it. Finally, the twenty-five dollar deductible plan virtually passed out of existence, being replaced by a one-hundred dollar deductible form, and later in addition to this a fifty-dollar deductible plan. Many are the motor car owners who have been fooled by the deductible feature of their collision coverage, thinking, for example, that under the fifty-dollar deductible plan it would be well to have the collision repair bill fifty-five dollars, let us say, so that the insurance company would pay it all. Never but once, however, did he make such an error of interpretation when he found to his amazement that the insurance company paid $5.00 of this amount and that he himself had to pay the lion's share.

IF the uninformed were asked at random what percentage of the automobile owners in this country were carrying insurance, the guesses we surmise would run anywhere from fifty to ninety-five per cent, and the balance of uninsured on this basis would run all the way from fifty to five per cent according to such guesses. As a matter of fact, competent authorities have estimated that something like sixty per cent of the automobile owners of this country are not carrying motor insurance. We are not able to substantiate these figures nor to deny their correctness, but we would risk an opinion that so far as fire and theft coverage is concerned more than forty per cent of the owners are insured. We should be more inclined to accept the sixty per cent estimate of uninsured as correct with respect to public liability and property damage coverage. On the assumption, however, that sixty per cent is a correct figure, there are close to fourteen million owners of automobiles assuming their motor risks themselves. As the public becomes better educated as to the advantages of insurance, it seems reasonable to expect that, even assuming no further growth of compulsory automobile insurance, a much larger proportion of car owners will, within a reasonable length of time, be insured. The risk is far too great for an individual himself to assume, especially in these days of high court awards for personal injury. There are those who take the ground that the ownership and operation of an automobile should be a privilege only for those who either are financially competent to pay damages for which they are responsible or who are farsighted enough to shift the risks which the operation of an automobile entail to a responsible insurance company.

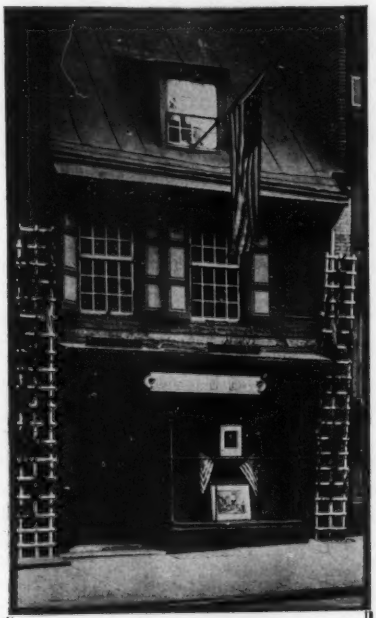

Photo by U. & U.

OUR COVER THIS MONTH

BETSY ROSS' HOUSE

IN PHILADELPHIA, PA.

WHERE the First Flag of the United Colonies Was Made by Betsy Ross at the Direction of General George Washington, Who Advocated Such a Banner to Bring Different Factions of His Army Into Accord Under His Leadership

Rainfall Hazard

(*Continued from page 22*)

1. The Cyclonic Storm Lane of the North Pacific follows the Japanese Current throughout the year. Round the world aviators must cross this Lane at great risk to life and property. The Detroit air pilots, Brock and Schlee, in their world flight, were balked at this Lane and had a narrow escape from destruction. The Lane could not be safely passed and the flight ended on the shores of Japan. These fliers should have known at the outset of their proposed flight the existence and conditions of this Storm Lane.

2. The crossing of Storm Lanes, both Oceanic and Continental, involve great hazards to aviation. Monthly and Annual charts of these Lanes should be carefully studied by all air pilots. The recent loss of the amphibian plane DAWN of the Grayson Flight from New York to London may be traced to an utter lack and neglect of Storm Lane knowledge. An ill-advised stunt wholly unjustified and detrimental to the best interests of aviation.

3. A knowledge of thunderstrom occurrence and distribution, both Oceanic and Continental, is indispensable to the successful navigation of the air.

4. Thorough acquaintance with the storm characteristics of the four quadrants of a Cyclonic LOW is of the utmost importance in approaching and passing of a Low Pressure Basin while navigating the air. The failure of the Hearst plane OLD GLORY Sept. 6, 1927, and of the Ruth Elder plane AMERICAN GIRL Oct. 11, 1927, in passing Oceanic Cyclonic LOWS in 1927 may be classed under this head.

5. The mechanism of the thunderstorm is such that it cannot be encountered without grave danger to life and property, in the navigation of the air. The ill-fated Shenandoah, U. S. Navy Dirigible, was destroyed September 5th, 1925, at an elevation of about 7,000 feet by a tornadic thunderstorm, or potential tornado, that could have been avoided.

6. Excess rainfall and atmospheric electrification must be considered in a safety-first solution of the problems of Flood Insurance.

7. The New England floods of November, 1927, emphasized the importance of scientifically located and constructed spillways on all streams where water power is developed by dams.

8. All streams subject to overflow from excessive rainfall should be surveyed and improved to render harmless the disposition of surplus storm water. The water sheds of these water courses should be carefully charted, under either State or Federal control, or under an equalization of combined authority.

(*Continued on page 28*)

(*Continued from page 27*)

9. A knowledge of Cumulus Cloud formations and the relation of thunderstorm occurrence is of vital importance to safe air navigation. "Holes in the Air" and "Air Pockets," and "aerial Niagaras," as the bete noire of air pilots, come under this head.

10. The problems of Weather Insurance and the scientific rating of windstorm hazards are closely connected with the genesis of thunderstorms and thunderstorm winds.

11. Fog is a form of precipitation with a drop diameter of 0.01 millimeters that offers most serious and dangerous obstacles to successful air navigation. Under the two general classes of Radiation Fogs and Advection Fogs this mass of condensed vapor should be carefully studied as to origin and distribution, as well as dissipation.

Sell the Idea

(*Continued from page* 10)

about the burning of Jim's barn and cows at all; we'll talk about the burning of *another* barn and herd, half a county or half a State away.

"Thompson used to have a barn pretty nearly as good as yours, but his herd couldn't have been worth much more than *half* as much as yours. Anyway, it doesn't matter now what it *was* worth, because, you know, he got burned out last week."

"No, I didn't know that! Was that the Peter Thompson whose place is over on the State Road? Gosh, ain't that too bad!"

"THAT'S not the worst of it, either. He was one of those fellows who think it's cheaper to carry their own insurance. You know the kind I mean, Jim: maybe they never *did* have a fire-loss before, and so they figure they're *never* going to have one; instead of figuring that every year they get by *without* a loss brings them just so much *nearer* to the time when, under the law of averages, *their* turn will come! Well, Pete didn't have a cent of fire-insurance. He's busted wide open. Probably have to sell the place, or most of it anyway. I hated to see him in town the other day, because I knew that just the sight of my old face would remind him of the many times I've begged and pleaded with him to let me take that load of *risk* and of *worry* clear off his shoulders and put 'em on the big, broad shoulders of our Farmers' Mutual Fire Insurance Company."

Well, Jim is thinking about his own *risk*, and he's thinking about mutual fire insurance now, sure enough; but *he* is doing the thinking on his own accord . . . or he *thinks* he is, which amounts to the same thing so far as *you* are concerned . . . and so instead of building barriers against being *sold* mutual fire insurance, the next thing you know he'll be *asking* about it.

"I've been figuring on talking to you about that myself, for some time, Tom; but I never seemed to get around to it. Now, what would ten thousand on that barn and contents cost me?"

Are you going to tell him? Not yet, you aren't; not by a jugful!

"How much do you carry on your house and furniture, Jim?"

That's what you'll say, if you are as wise as your age. You might as well make one mouthful of the whole business while Jim is in the mind for it; so why get his mind fixed on the price of only a *part* of what he needs? Once his mind gets reconciled to that figure, it's going to be like pulling teeth to *double* it, or whatever you'll have to do to include all the other property on which he needs protection just as badly as he needs it on his pet possessions—that barn and prized herd.

BECAUSE that is his pet possession, it offered the easiest way into his mind, but now you are *in*: why not make the most of it? You'll never again have a better opportunity, because you are surely going to provide protection on that pet possession, anyway, right now; and if you have to come back to sell more coverage, you'll have to start him thinking about something that doesn't mean quite so much to him.

That's why it was suggested that you pick his most prized possession to start with. Maybe it isn't a barn and herd of cows. Maybe it's his home, or his haystacks, or what has he? Whatever it is, *you* can figure out for yourself in each individual case without a speck of trouble; and *that's* the place about which to start him *thinking* along the lines suggested here.

You have noticed that we have actually accomplished FIVE distinct things in this little talk to our dairy-farmer:

First, we made him feel *friendly* towards us.

Second, we've made him *think* about his most prized possesion.

Third, we've reminded him *how much* he has tied up in it.

Fourth, we've warned him that fire is no respecter of dairy-farmers; and that long immunity from loss means merely that *his turn* is so much nearer.

Fifth, we've brought the thought of *Mutual Fire Insurance* firmly into the front of his consciousness.

—And any solicitor for a Mutual Fire Insurance Company who can do these five things—and there's not a reason in the world why he *can't* do 'em!—can CLOSE THE CONTRACT, if he'll just keep on being as natural and as sensible as he has been thus far.

But, just in case there may be a doubt or two on the question of CLOSING, maybe we'd better take it up alone and talk it over together in the *next* of this little series of articles. What do you say?

All right; see you in the April number!

Good luck to you in the meantime.

Mutual Insurance Meetings

VARIOUS problems relating to mutual insurance management, underwriting, claims, accounting, office management, statistical procedure will be given consideration in the series of meetings planned for the months of March, April and May.

Underwriters connected with company members of the Federation of Mutual Fire Insurance Companies will hold a two-day conference at Hotel Cleveland, Cleveland, Ohio, beginning Monday, March 26th. The committee having arrangements for this meeting in charge of which Mr. R. B. Howd, Assistant Secretary, Millers Mutual Fire Insurance Association of Alton, Illinois, is Chairman, has done a vast amount of preliminary work and there is every indication that the meeting will be a profitable one well attended by mutual underwriters.

The Third Annual Conference of Claims Executives connected with company members of the National Association of Mutual Casualty Companies and the National Association of Automotive Mutual Insurance Companies is scheduled at Hotel Statler, Detroit, Michigan, on April 9th, 10th and 11th. This Conference is one of the best attended and most interesting of the group meetings of mutual men and this year promises to break its own record both as to at-

(*Continued on page 31*)

Crop Hazards

(*Continued from page 25*)

year after year, the rate must be reasonable. For farmers whose credit costs them 8 or 10 per cent and who are asked to carry insurance requiring another 8 or 10 per cent of their gross income, the load becomes a very heavy one. In contrast, if credit may be had for 6 per cent and insurance for another 4, the insurance becomes attractive.

This question of cost and salability is, of course, closely bound up with the degree and type of protection offered. A conservative amount of protection with a moderate premium is far superior to fairly complete protection with a high rate. The former encourages the use of the insurance as a hedge against complete failure,—a relatively infrequent occurrence but one in which the coverage renders the highest measure of good. For the same premium income, a wider spread of risk is also accomplished.

It seems desirable, in this connection, to graduate the premium, granting credits for unusually small coverages and scaling up the rate for excess amounts, with additional rates for special riders. This is the common practice in most property lines of insurance and serves to clearly show the insured that for an unusually complete coverage a correspondingly high premium is charged.

The policy should be clear and definite. Conflicting provisions, alternative methods of settlement, and elaborate and detailed warranties are bound in time to place the insurance in disfavor with the farmer. It is the writer's belief that the policy should guarantee a minimum but definite sum per acre against all sources of damage from weather, plant disease and pests. Where this is done, the uncertainty of a decline in market price should also be indirectly covered. The amount of insurance granted, however, can be placed sufficiently low that the market element becomes an important one only in an exceptional year, which is desirable both for the insurance afforded and the additional definiteness of the contract.

IT is the belief of the writer, in the light of the experience to date, that crop insurance could be made a practical line on the major farm crops. If it could be so generally developed, it would mean to agriculture what fire, marine, tornado, and other forms of property insurance mean to industry. Since 1920, the cooperative movement among cotton and grain farmers has developed greatly and these organizations could be used in the proper handling of the insurance. If this type of insurance were used as collateral in the extension of farm credit, the chances of its success would be greater. If conservatively written by strong companies, with reinsurance against excess loss, and under good management, there is no reason why it should not be a profitable undertaking for the insurance companies.

Certainly the farmers would welcome an opportunity to join in any undertaking which would in any measure serve to standardize their income and remove the uncertainty of complete failure. The American grain and cotton crop had an estimated value of over five billion dollars in 1925 which if covered to 40 per cent of its value would have a premium income for this line of insurance of $100,000,000 or more. Certainly this is a field of insurance of national importance and one of unusual promise.

P. W. A. Fitzsimmons Nominated

Named for Election as Director of Chamber of Commerce of the United States of America

Mr. P. W. A. Fitzsimmons, President of the Michigan Mutual Liability Company, Detroit, Michigan, a member of the Board of Commissioners of the American Mutual Alliance, Director and Past President of the National Association of Mutual Casualty Companies, Director of the Detroit Board of Commerce, for many years prominent in the field of mutual insurance, has been placed in nomination by the Presidents of the National Association of Mutual Insurance Companies, Federation of Mutual Fire Insurance Companies, National Association of Mutual Casualty Companies, National Association of Automotive Mutual Insurance Companies and the Mutual Fire Insurance Association of New England as Director in the Chamber of Commerce of the United States of America representing insurance to succeed Mr. James S. Kemper, whose term of office expires this year.

Photo by Melvin H. Sykes

P. W. A. Fitzsimmons

Mr. Fitzsimmons enjoys a wide acquaintanceship among mutual insurance men throughout the country. He has held many offices of importance within the gift of the associations with which he has been most actively connected, and is well known among the executive heads of the companies. His business and social connections outside the field of insurance are extensive. He is an active member of many boards and organizations which profit by the wealth of his broad experience and the soundness of his business judgment.

Prior to assuming the managership and later the presidency of the company which he now heads, Mr. Fitzsimmons was engaged in the banking and manufacturing business in Southern Michigan, where he also enjoys the distinction of being a farmer. He is a man of tremendous energy and business capacity and an outstanding exponent of the mutual cause. The various mutual associations which have from time to time met in the city of Detroit have found Mr. Fitzsimmons a genial host of engaging personality and with a thorough understanding of the business in which he is engaged. In nominating him to the position so ably filled for several years by Mr. James S. Kemper, the officers of the several mutual associations feel that they are putting forth a candidate who enjoys unusual qualifications for the position of Director.

Aviation Insurance

(*Continued from page* 19)

newed life and additional valuation is allowed after each of a stipulated number of complete overhauls.

Some of the aircraft policy conditions unique to aviation insurance are the right to inspect the risk at any reasonable time and the barring from coverage of first flights of new or altered planes. We are reminded of the early days of automobile insurance when we read the clause forbidding any other than the named pilot to operate the plane. The days of named-driver policies are over in automobile insurance and their counterpart will probably eventually be things of the past in aviation insurance. The increasingly rigid examinations of pilots by the government and their careful selection by regular operators is putting most of them gradually in the class of "known quantities."

The gypsy-flyer days taught the underwriters to deny liability for loss or damage while the aircraft is left unattended in the open. We also find the exclusion of stunting, instructional flights and night flying. These are permitted, however, under the most strict compliance with the underwriter's conditions as to equipment, etc.

The few active aviation underwriters refused to even quote rates on the trans-Atlantic flights. Their almost prophetic attitude toward the wisdom of such flights is made clear in the printed policy conditions. Under the usual policy all liability is denied if a land plane flies more than one mile from shore or if a seaplane flies more than five miles from shore.

Deductibles are the rule in aviation insurance and they are probably as truly justified as they are in automobile collision insurance. These usually make the operator liable for the first 10%, or some agreed amount, of every loss. They take care of the many small accidents which occur in taking off and landing the plane. These should be considered a fixed expense of operation and should not be cared for through insurance, which would add the unnecessary expenses of office work, investigation and adjustment.

Much has been borrowed from marine, as well as from automobile insurance. The insured must keep a daily record or log book, one for each pilot, airplane and engine. In this log book must be recorded the daily time flown, results of inspection, details of overhauls and repairs and nature of flights, passengers carried (if any) and other matters of like nature. The insured must certify these logs as correct each flying day and they must be submitted to the insurer in support of all claims for loss or damage.

This requirement of keeping log books is similar to that in force aboard all ocean-going vessels. It is a government requirement there. When the clause was written in the insurance policy it was an attempt on the part of the underwriter to copy the maritime regulation and to adapt it to his own support. Erasures are not allowed in log books, as these books of "original entry" are primary evidence. Their importance at sea is illustrated by the fact that they are always among the few things a master makes every endeavor to rescue from the sinking vessel.

The foregoing policy conditions apply to each of the aircraft property hazards that are assumed by the underwriter. The great majority of these conditions apply also in the case of third party liability coverages.

The aircraft fire and lightning coverage is most commonly limited to flight, any attempts thereat, or while the engine is running immediately subsequent to flight. During the time it is in the hangar it is considered as "contents" and is usually insured with the hangar under one of the standard fire policies. The underwriters demand that a fire extinguisher be kept on the plane at all times and that the hangar have proper fire fighting equipment.

Accidental damage coverage is very often called "crash" insurance. This has been the Waterloo of underwriters in the past. At the present time they tread rather lightly and make certain of their ground before committing themselves to liability. Some even go so far as to "wield the big stick" and refuse this coverage unless they also underwrite the more lucrative liability business. This seems a most unjustified and short-sighted attitude.

Both franchises and deductibles are used rather freely in order to improve the moral hazard of crash insurance. A 10% franchise is not quite as severe as a 10% deductible because, in the case of the former, the underwriter is liable for the entire amount as soon as the loss exceeds 10% of the value insured. The franchise is probably preferable to the deductible where the operator does not maintain any extensive facilities for repairs.

Constructive total loss insurance may be provided by making the franchise high enough. Usually an 85% loss is considered total and the underwriter takes title to the often worthless wreck.

Tornado, cyclone and windstorm coverage requires special attention in the case of aviation risks because of the different localities in which a plane normally finds itself in such a short time. The insurance excludes loss or damage in consequence of flight. It can be readily understood that this should be taken care of by crash insurance instead of by tornado because of the difficulty of determining the proximate cause of the loss in the latter case.

Theft, robbery and pilferage insurance seems an unnecessary precaution in the case of the aircraft themselves. Who could steal one and "get away with it"? Lately there have been two plane thefts noted in the newspapers and their recapture or wrecks have not been reported. It must be a very efficient "fence" that would attempt to handle airplanes.

The real danger, however, is from the theft of parts, particularly of navigation instruments and radio. The insuring clause is very similar to the one found in automobile policies which excepts losses due to persons in the insured's employ, etc. There is a twenty-five dollar deduction in the case of navigation instrument loss. This is more tempered than the automobile tools exclusion clause, as indemnity is only paid for automobile tools if the entire automobile is stolen.

The most important non-aircraft property hazard is that of the hangar. It is really a regular property insurance risk. Companies that will not write any other aviation hazards will insure hangars against fire, lightning and windstorm. There are no features of the hangar hazard that should be considered the peculiar result of aviation beyond the fact that the contents (airplanes, spare parts, wing "doping" preparations, etc.) are of the most inflammable nature. This makes of great importance the policy condition forbidding the running of the airplane engine in the hangar.

Aviation cargo has been important in Europe for a number of years. The recent advent of the American Railway Express in this field should do much to soon make it an important factor in our own economic or-

ganization. The coverage usually begins at the arrival of the cargo at the plane and ends with its discharge. A most practical method is being evolved of empowering the air transport companies and freight agents to issue policies directly to the consignors of the freight.

The damage from aircraft coverage promises indemnity to the owner of the insured property (home, factory, etc.) for direct loss or damage by aircraft. It also guarantees the removal of aircraft endangering the premises. This hazard will become of increasing importance if airplanes become, as is often predicted, as common as Fords. Even at the present time the hazard is more than nominal where the insured's property is within five miles of an established airway or airdome.

Third party liability insurance is also based on the foregoing complete, detailed information about the operator as well as on the extensive restriction of his activities by policy conditions. So-called public liability insurance usually includes the hazards of personal injury of strangers and/or damage to their property. It is written for varying coverages beginning at $1,000 per accident for property damage and $5,000 per person, $10,000 per accident for personal injury.

The passenger hazard business goes begging with all but one underwriter at the present time. The difficulty here is that there are no laws or court cases indicating the extent of the operator's liability for passenger injuries. The venturesome underwriter must take his chances with a wily lawyer and a gullible, sentimental jury.

The remaining third party hazard, injury to workmen, is taken care of by the regular forms of Workmen's Compensation or Employers' Liability insurance. The rates for these are the only ones that can claim an approach to the scientific. They are based on war department training field statistics. These were weighted in a most interesting manner to make them applicable to commercial operating conditions.

The personal hazards are the "risks to life and limb" that an individual assumes in engaging in aviation. They refer to pilot, operator or passenger. These may be insured indirectly by regular life insurance and by regular accident policies.

Very few life insurance policies are affected by the aviation activities of their holders. A small number are voided by death from aviation accident during the first two years after issue. These are all policies of relatively unimportant companies.

The aeronautic provisions in the disability and double indemnity clauses are somewhat more drastic. A few unimportant companies and one well-known company void the disability clause if an injury is traceable to aeronautics. A few do this only during the first two years of the policy. However, the vast majority of disability clauses, including those of six of the outstanding companies, are not affected by injury from engaging in aeronautics.

Quite the reverse is true of the double indemnity feature of life insurance policies. Most of these are voided by death.

A few liberal accident policies omit the aeronautic prohibition. The majority of these, however, as well as all accident and health policies examined are jeopardized by even an occasional flight.

The foregoing discussion was concerned with insurance taken before the insured contemplated aviation activity. If the insured shows in his application that he will regularly engage in aeronautics he will be considered a sub-standard risk, at best. Most companies will refuse regular life insurance. What little insurance is sold to pilots is most restricted and expensive coverage. The majority of them are self-insurers, using that term most unscientifically.

Mutual Insurance Meetings

(Continued from Page 28)

tendance and interest in the various topics planned for discussion.

The Third Annual Conference of Accountants, Statisticians and Office Managers conected with company members of the National Association of Mutual Casualty Companies and the National Association of Automotive Mutual Insurance Companies will meet at Hotel Statler, Detroit, Michigan, on Monday and Tuesday, April 23rd and 24th. The Conference will be under the general chairmanship of Mr. Cooke Lewis, Vice-President, Liberty Mutual Insurance Company, Boston, Massachusetts. The program contemplates papers and formal discussions on six major subjects of importance to those who will attend and it is expected that the interest will be even greater than that shown at the two previous conferences. Speaking assignments have been given to more than twenty-five mutual accountants, statisticians and office managers. No mutual group meeting has ever been planned with such attention to detail as has this one and the Committee on Arrangements, of which Mr. Lewis is Chairman, promises that each hour of the two day session will be crowded with worth while discussions.

Because of additional items of important business to be transacted the Joint Semi-Annual Meeting of the Federation of Mutual Fire Insurance Companies, the National Association of Mutual Casualty Companies and the National Association of Automotive Mutual Insurance Companies scheduled to convene at Greenbrier Hotel, White Sulphur Springs, West Virginia, on Wednesday, May 2nd, has been extended to four days instead of three days as first planned. In addition to the general sessions of the three associations, there will be meetings of the Governing Board of each and of several of the more important committees. In addition the Management Committee of the Mutual Re-Insurance Bureau will hold a meeting as will also the Mutual Fire Prevention Bureau. Special Pullman cars leaving Chicago on Tuesday, May 1st, will carry delegates from companies located in and West of Chicago.

Mutual's Losses Light at Fall River Fire

CONSERVATIVE underwriting practice which for almost two centuries has been a principle contributing largely to the success of mutual insurance was again brought to public attention by the recent disastrous conflagration at Fall River, Massachusetts.

With a total estimated loss of $4,000,000, mutual companies suffered to an extent of less than $125,000, the Mutual Fire Insurance Association of New England reporting that the net aggregate estimated losses of companies within that association was $124,105. The group of mutual companies comprising the New England Association showed at the close of business on December 31st, 1926, and so reported to the Insurance Department, assets of $14,538,304, with liabilities of $6,912,587 and a surplus available to policyholders of $7,625,717.

Pledged to a competent, prudent and conservative execution of its business for the purpose of obtaining the greatest benefits for its policy-holders and as its contribution to a continuance of the present high regard for the principles of mutual insurance.

HARDWARE MUTUAL CASUALTY CO.
STEVENS POINT, WISCONSIN

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Twin Mutual Group
211 Congress Street
Boston, Mass.
A. Shirley Ladd, Secretary

SAFETY

Combined Statement
June 30, 1927

Assets	$8,654,446.38
Liabilities	5,549,795.48
Surplus	3,104,650.90

Dividends Returned to Policy Holders
Since Organization . . . $21,639,703.73

FEDERAL HARDWARE *and* IMPLEMENT MUTUALS

Minnesota Implement Mutual
Fire Insurance Co.
Owatonna, Minnesota

Retail Hardware Mutual
Fire Insurance Co.
Minneapolis, Minnesota

Hardware Dealers Mutual
Fire Insurance Co.
Stevens Point, Wisconsin

Departments
NEWARK ATLANTA DALLAS SAN FRANCISCO WINNIPEG

STRENGTH

LUMBERMENS MUTUAL CASUALTY COMPANY

****

Sixteenth Annual Statement

JANUARY 1, 1928

ASSETS

U. S. Government bonds	$1,528,600.00
State, province, county and municipal bonds	2,189,640.00
Federal Land Bank and other bonds and stocks	677,248.00
First mortgage loans on real estate	676,000.00
Cash in banks and on interest	1,047,566.51
Premiums in transmission	746,836.54
Accrued interest	62,325.92
Total cash assets	**$6,928,216.97**

LIABILITIES

Reserve for losses	$2,319,176.87
Reserve for unearned premiums	2,274,392.93
Reserve for taxes and expenses	275,973.55
Reserve for fluctuation in market value of securities	100,000.00
Reserve for contingencies	**750,000.00**
Total liabilities and reserves	$5,719,543.35
Net cash surplus	**1,208,673.62**
Total	**$6,928,216.97**

JAMES S. KEMPER, *President*

Pantheon Building, Chicago, U. S. A.

AUTOMOBILE BURGLARY COMPENSATION
PLATE GLASS PUBLIC LIABILITY

Associate Company Under "L-M-C" Management AMERICAN MOTORISTS INSURANCE COMPANY